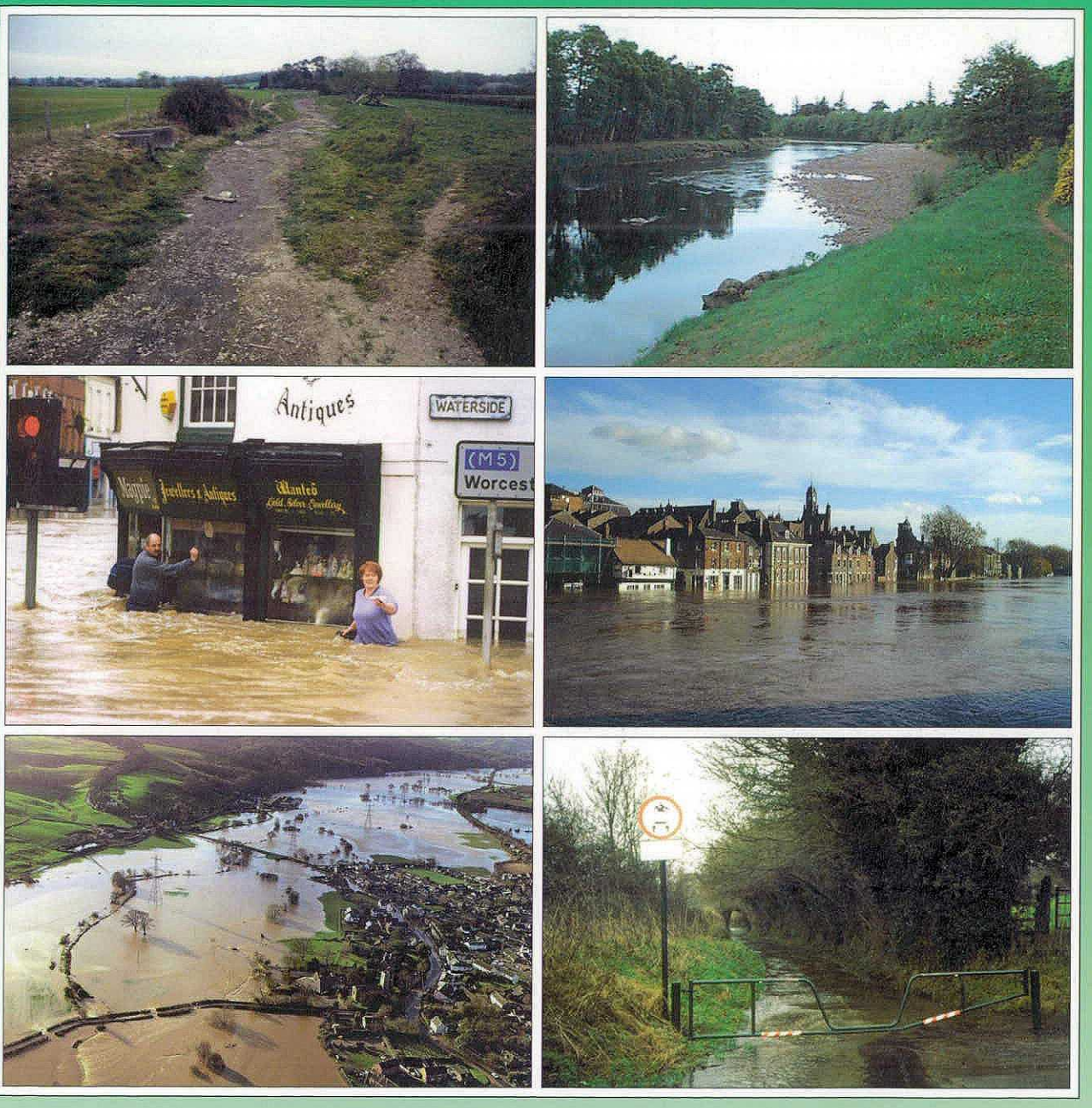
Hydrological data UK



Hydrometric Register and Statistics 1996-2000

CENTRE FOR ECOLOGY AND HYDROLOGY • BRITISH GEOLOGICAL SURVEY
WALLINGFORD

HYDROLOGICAL DATA UNITED KINGDOM

HYDROMETRIC REGISTER AND STATISTICS 1996–2000

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Editors: Terry J. Marsh and Martin L. Lees

The acquisition, archiving and validation of the bulk of the hydrological data featured in this publication was undertaken as part of the National River Flow Archive project at the Centre for Ecology and Hydrology, Wallingford. Martin Lees is the project manager and liaison with the measuring authorities (see page 201) is undertaken by a team of regional representatives. In addition to the editors, this team currently includes:

Matt Holmes, Jim Hudson, Jamie Hannaford and Felicity Sanderson.

Over the period covered by the publication other important contributions have been made by Henry Gunston, Karen Croker, Samantha Green, Jackie Carr, and Patricia Sheffield. Rebecca White, Renata Moraes and Cedric Laize were responsible for the production of the gauging station maps and Ned Hewitt provided valuable proof-reading assistance. Jamie Hannaford supervised the editing and updating of data on the National River Flow Archive – a major undertaking.

The style and contents of the Hydrometric Register and Statistics 1996–2000 volume, and the scope of the data retrieval service which complements it, reflect over 20 years of archive system development supervised, latterly, by Oliver Swain.

The British Geological Survey is responsible for the acquisition, appraisal and archiving of the featured hydrogeological information. Andrew McKenzie is the National Groundwater Level Archive manager and Rosemary Fry is responsible for data archiving and the associated liaison with the measuring authorities; Rose Hargreaves and Melinda Lewis provide technical guidance.

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The materials used in the production of this volume are made from the pulp of softwood trees in managed Scandinavian forests in which every tree cut down is replaced by at least one more, thus replacing the Earth's resources.

HYDROLOGICAL DATA
UNITED KINGDOM

HYDROMETRIC REGISTER AND STATISTICS 1996–2000

A catalogue of river flow gauging stations and observation boreholes together with summary hydrometric statistics

Centre for Hydrology and Ecology
Wallingford

British Geological Survey

Cover Photographs

The photographs have been selected to illustrate the dramatic change in hydrological conditions over the 1996–2000 period. The exceptionally hot and dry summer of 1995 and the following very dry winter established widespread drought conditions, which in some parts of southern Britain extended well into 1997. Thereafter, a sequence of wet seasons generated a prolonged recovery in river flows and aquifer recharge rates. This recovery culminated in the remarkably extensive and persistent flooding which began in October 2000 and, in some areas, continued through the spring of 2001.

Details of the individual photographs are given below:

Top left: River Pang at Bucklebury Ford. Although the river is not perennial at this site, the absence of flow across Bucklebury Ford is an indicator of significantly low groundwater levels. This shot from the bridge at the ford, shows the river bed still moist from the groundwater recession in May 1997. *Photo: Martin Lees*

Top right: River Findhorn at Forres, Highland Region, 12 km east of Nairn. This gauging station is notable for recording one of the highest gauged flow in the UK; however, this picture shows the Findhorn in more tranquil mood on 22/05/1998. It was the start of a sequence of low flows from May to September; accumulated runoff over this period was the second lowest on record in a series from 1958. *Photo: Patricia Sheffield*

Middle left: River Avon at Evesham. This famous picture, at the junction of Port Street and Waterside immediately by the bridge over the Avon in the centre of Evesham, illustrates graphically the severe character of the flood of 9/04/1998. The flood was notable from Northampton, along the Warwickshire Avon through to Wales and south down the Cherwell. It prompted a significant review of flood warning and alleviation measures throughout England and Wales. *Photo: Courtesy of the Evesham Journal (http://www.journal.freeuk.com/contact.html)*

Middle right: River Ouse at York. York is known to be susceptible to flooding whenever the whole of the Ouse catchment contributes high runoff. The protracted rainfall through the autumn and early winter of 2000 was no exception and the river recorded its highest level at the Viking Hotel in York in a series from 1885. *Photo: Courtesy of the Ridings Area of the North East Region of the Environment Agency*

Bottom left: River Culm at Stoke Canon, looking south towards Exeter, about 10km distant. This was the morning of 8/12/2000. The Culm normally flows in two channels at this point, but they are barely discernible given the widespread floodplain inundation. The road crossing in the middle ground is the A396 and the main SW railway link is to the top right. *Photo: Marc Hill, courtesy of Apex News and Pictures (http://www.apex-photos.co.uk)*

Bottom right: Watery Lane, Skirmett, Oxfordshire in December 2000. This is an aptly named road for this example of clear water flooding (resulting from aquifer discharge from unusually high groundwater levels). Many areas of the Chalk aquifer in southern Britain were affected by this phenomenon. Unlike fluvial flooding, some such flows were maintained for months on end. *Photo: Terry Marsh*

FOREWORD

Hydrometric data provide the foundation for both the science of hydrology and for water management generally. Skilful management and manipulation of hydrometric data underpins the development of improved engineering design procedures and more effective strategies to reconcile the often competing water demands of man and the aquatic environment. Drought and flood episodes during the period reviewed in this publication have underlined our continuing vulnerability to extreme weather conditions. In many areas the range of recorded river flows and groundwater levels were extended over the five years beginning with 1996. Hydrometric data assume an increased importance in circumstances where hydrological change is underway or anticipated. Their strategic value will be well demonstrated as, through time, they contribute to reducing the current uncertainty regarding the impact of global warming on hydrological conditions across the UK.

River flows and groundwater levels in the United Kingdom reflect more than just the intensity and distribution of rainfall and the magnitude of evaporation losses. Geology and land use influence river runoff and aquifer recharge patterns, and the natural variations of each are often substantially disturbed by the complex and evolving pattern of water utilisation. Careful stewardship is therefore required to maximise the utility of the substantial volume of nationally archived hydrometric data.

The primary objectives of the Hydrometric Register and Statistics 1996–2000 publication are to document recent water resource variations, to set them in a historical context and to serve as a primary reference source for a rapidly expanding community of data users. Information is structured and presented to allow the selection of appropriate datasets for particular projects, and to assist in the interpretation of analyses based on the basic river flow and groundwater level data.

This report has been assembled with the active cooperation of measuring authorities – principally the environment agencies – across the UK. It stands as a testament to the expertise and commitment of hydrometric field and office personnel in maintaining the continuity and integrity of the featured river flow and groundwater level data.

The work of the National River Flow and Groundwater Level Archives is overseen by a steering committee that includes representatives of Government departments, the environment agencies and the water industry from England, Wales, Scotland and Northern Ireland. Their support for, and contribution to, this publication is gratefully acknowledged.

Professor J. S. Wallace
Director, CEH Wallingford


SO Letters designating 100km. squares in the National Grid
Regional boundaries of the Environment Agency and the Scottish Environment Protection Agency
Head Offices
Regional Offices
Headquarters of the Rivers Agency
Notes: The Environment Agencies began operations in April 1996
SEPA regional divisions applied until April 2001 only
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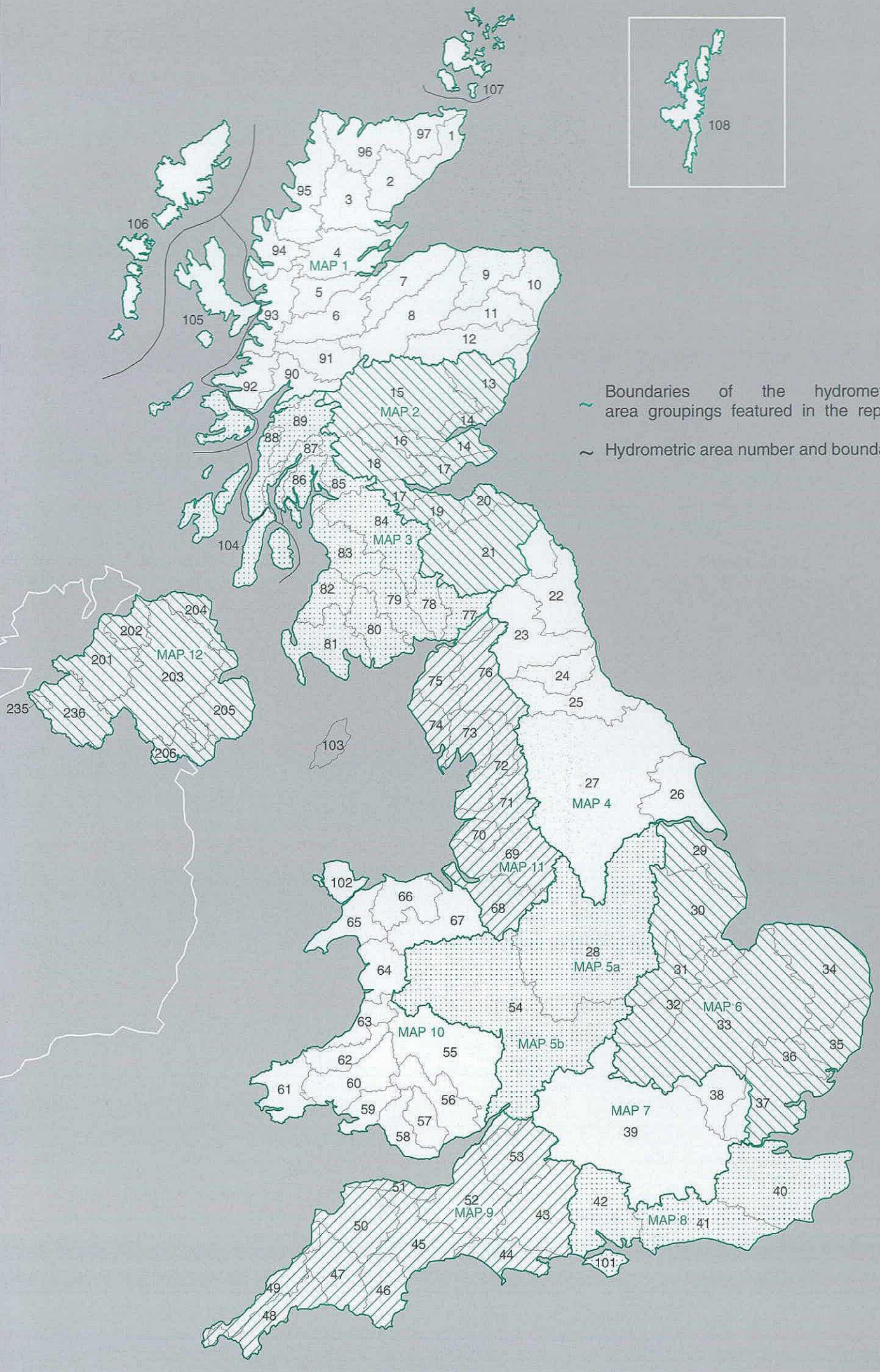
SEPA EAST
SEPA WEST
NORTHERN IRELAND
EA NORTH WEST
EA NORTH EAST
EA MIDLANDS
EA WALES
EA ANGLIAN
EA THAMES
EA SOUTH WEST
EA SOUTHERN
Dingwall
Stirling
Edinburgh
East Kilbride
Belfast
Warrington
Leeds
Peterborough
Solihull
St Mellons
Bristol
Reading
London
Worthing
Exeter


Boundaries of the hydrometric area groupings featured in the report
Hydrometric area number and boundary
MAP 1
MAP 2
MAP 3
MAP 4
MAP 5a
MAP 5b
MAP 6
MAP 7
MAP 8
MAP 9
MAP 10
MAP 11
MAP 12
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INTRODUCTION

The Hydrometric Register and Statistics 1996–2000 report is the fourth such five-year volume in the Hydrological data UK series. It provides a comprehensive range of hydrometric statistics relating to the featured period, and serves as a reference source for hydrometric information that does not change materially from year to year. Details of the gauging stations, the catchments they command and observation boreholes in the national hydrometric networks are presented together with summary statistical data to allow an examination of the variation in surface and groundwater resources both within the period 1996–2000 and by comparison with the long term average conditions. Information in the Surface Water – Register and Statistics section is grouped according to the major hydrological divisions in the UK (see below) – these may not correspond to the administrative regional divisions of the principal measuring authorities (see Frontispiece I and page 201). In all, details are given of more than 1500 gauging stations and 160 observation boreholes.

The National River Flow Archive (NRFA) is maintained by the Centre for Ecology and Hydrology Wallingford (formerly the Institute of Hydrology) and the National Groundwater Level Archive is maintained – also at Wallingford – by the British Geological Survey. Both CEH Wallingford and BGS are component bodies of the Natural Environment Research Council.

A description is given of the National River Flow and National Groundwater Level Archives together with details of the associated data retrieval facilities.

Constraints of space have required a number of abbreviations and acronyms to be used, particularly in the descriptive material in the Surface Water section. These, together with selected technical terms, are defined in the Glossary.

A major proportion of the hydrological data previously published in Yearbooks in the Hydrological data UK series – together with substantial additional information – is now published electronically on the National River Flow Archive website. Page 203 gives details of all publications in the Hydrological data UK series, together with an outline of the data and other information accessible via the website.

Sources of Information

The hydrometric data presented in this volume have been abstracted primarily from the National River Flow Archive and National Groundwater Level Archives. In England and Wales responsibility for the collection and initial processing of the data rests principally with the Environment Agency. Responsibility for a small proportion of the featured monitoring sites – including a number with lengthy records – rests with the water services companies and a number of public and private organisations. In Scotland, the acquisition and processing of hydrometric data rests principally with the Scottish Environment Protection Agency (SEPA). On 1st April 2001 SEPA's regional structure was replaced by a national structure with the regions replaced by areas with the same geographic borders (see page 201); the hydrometric functions are co-ordinated by the National Hydrology Manager. In Northern Ireland primary responsibility rests with the Rivers Agency (Department of Agriculture and Rural Development). Additional data have been provided by the Geological Survey of Northern Ireland, the Borders Regional Council, Water Supply Companies and by various research bodies and public undertakings (see page 201).

River flows in the United Kingdom are often difficult to measure precisely – particularly in flood or drought conditions – and can be substantially affected by artificial influences. These influences range from a large diminution in flows caused by a major abstraction immediately upstream of the gauging station to the often subtle impact of land use change on river flow patterns. Groundwater levels may also be heavily influenced by man's activities – abstraction rates in particular. An appreciation of these effects is necessary to exploit the archived data most effectively. For this publication important material relating to the impact of changing patterns of water utilisation on river flow regimes and groundwater level behaviour was supplied by the UK environment agencies.

Apart from the figures for CEH Wallingford's own experimental basins, the great majority of the areal rainfall data presented in this volume is derived from validated rainfall data provided by the Met Office.

Some slight variations from contributors' figures may occur; these may be due to different methods of computation or the need for uniformity in presentation.

The Natural Environment Research Council acknowledge and extend their appreciation to all who have assisted in the collection and provision of information for this publication; the community at large gains considerably from the efforts of those who take the initial field observations and those who process them in hydrometric offices.

The UK Gauging Station Network

The national gauging station network – currently comprising over 1300 stations – is very dense in global terms; a necessary response to the dense drainage network and the diversity of the UK in terms of its climate, geology, land use and patterns of water utilisation. A distinguishing characteristic of the network is the variety of flow measurement techniques deployed[1]. The modest size of UK rivers is reflected in the widespread use of flow measurement structures (of many different designs and configurations). Many stations are 'hybrid' (exploiting different flow measurement techniques for different flow ranges) and a significant minority are multi-site (e.g. where high and low flow measurement is undertaken at separate sites). Such gauging arrangements normally require more complex data processing procedures to derive flows for archiving purposes.

The Acquisition, Computation and Accuracy of Gauged Flows

Gauged flows are generally calculated by the conversion of the record of stage, or water level, using a stage-discharge relation, often referred to as the rating or calibration. Stage is measured and recorded against time by instruments usually actuated by a float in a stilling well. The instrument records the level either digitally – solid state loggers are deployed at over 95% of the operational gauging stations featured in this volume – or continuously by pen and chart. At the majority of the gauging stations in the United Kingdom provision is made for the routine transmission of river levels directly to the processing centre, by telephone line or, less generally, by radio; on occasions satellites have been used to receive and re-transmit the radio signal. The rapid growth in the use of the public telephone network for the transmission of river level and flow data is enabling hydrometric data acquisition to proceed on a near real-time basis in most areas. Typically, levels are recorded at 15-minute intervals and stored on-site for overnight transmission to allow the initial processing to be completed on the following day. Normally, both digital and analogue recording devices are deployed at gauging stations to provide a measure of security against loss of record caused by instrument malfunction.

The stage-discharge relation is obtained either by installing a gauging structure, usually a weir or flume with known hydraulic characteristics, or by measuring the stream velocity and cross-sectional area at points throughout the range of flow at a site characterised by its ability to maintain the relationship.

The accuracy of the processed gauged flows therefore depends upon several factors:

i. accuracy and reliability in measuring and recording water levels,
ii. accuracy and reliability of the derived stage-discharge relation, and
iii. concurrency of revised ratings and the stage record with respect to changes in the station control.

Flow data from ultrasonic gauging stations are computed on-site where the times are measured for acoustic pulses to traverse a river section along an oblique path in both directions. The mean river velocity is related to the difference in the two timings and the flow is then assessed using the river's cross-sectional area. Accurate computed flows can be expected for stable river sections and within a range in stage that permits good estimates of mean channel velocity to be derived from a velocity traverse set at a series of fixed depths.

Flow data from electromagnetic gauging stations may also be computed on-site. The technique requires the measurement of the electromotive force (emf) induced in flowing water as it cuts a vertical magnetic field generated by means of a large coil buried beneath the river bed or constructed above it. This emf is sensed by electrodes at each side of the river and is directly proportional to the average velocity in the cross-section.

British and International Standards are followed as far as possible in the design, installation and operation of gauging stations. Most of these Standards include a section devoted to accuracy and many include recommendations for reducing uncertainties in discharge measurements and for estimating the extent of the uncertainties which do arise.

The National River Flow Archive (NRFA) exists to provide not only a central database and retrieval service but also an extra level of hydrological validation. To further this aim, project staff at CEH Wallingford liaise with their counterparts in the measuring authorities and, by visiting gauging stations and data processing centres, endeavour to maintain the necessary knowledge of local conditions and problems which is essential to help identify and rectify anomalous flow data.

The NRFA is principally a database of daily and monthly flows. Monthly peak values are archived to provide a guide to overall flow variability but their accuracy can vary widely. The primary source of nationally archive flood data are the UK Flood Event Archive and the Flood Estimation Handbook[2] (see page 204).

River Flows 1996–2000

The 1996–2000 period was characterised by very large spatial and temporal variations in river flows. Over wide

areas the range of recorded variation in runoff rates was extended as the focus of hydrological concern switched from the persistent drought conditions of the mid-1990s to the remarkably widespread flooding in the autumn and early winter of 2000 – the most severe flooding in England and Wales since the snowmelt-generated flooding of March 1947[3]. Daily river flow variations for 1996–2000 are illustrated on pages 6 and 7 for a representative set of 12 catchments across the UK; the location of the featured gauging stations is given on the respective regional maps – see below. The daily flow hydrographs are shown together with the pre-1996 daily maxima and minima (the shaded envelopes) and the 10-day running mean (broken trace).

Scope of the Register and the Statistical Tabulations

Hydrometric and hydrological information is presented for the major hydrological regions in Britain, and for Northern Ireland (where some catchments extend into the Irish Republic). The regional divisions follow catchment boundaries and are shown in Frontispiece II (the administrative boundaries of the EA, SEPA and the Rivers Agency are featured on Frontispiece I). Details of those few gauging stations operated by other organisations are included in the relevant hydrological regions. For each of the major hydrological regions data are presented in three parts:

A Gauging Station Location Map*; the scale varies between maps in order to make the most effective use of the available space. 100 km grid squares are identified by standard letter and numeric codes (see Frontispiece I). Hydrometric Areas (see below) are referenced by large green numerals. In England and Wales, the administrative boundaries of the EA regions are shown as a grey trace; in some areas these correspond with national boundaries. To improve clarity, a few stations are shown slightly displaced from their true national grid location. Concentric open circles are used to identify gauging stations for which no post-1998 data are held on the NRFA; a few decommissioned gauging stations with limited record lengths have been omitted. Map inserts have been provided for additional clarity in areas where the local network is especially dense.

ii. A Gauging Station Register. Stations are tabulated in Hydrometric Area sequence. Within each Hydrometric Area stations are listed according to their position in the drainage network – downstream from headwaters to the tidal limits – this allows for easy comparisons between stations in the same catchment or sub-catchment. A list of stations ordered according to their NRFA number (see below) is given in the Concise Register of Gauging Stations (pages 159 to 164).

iii. A tabulation of Hydrometric Statistics together with reference information relating to the gauging station, its flow record and the catchment it commands. The stations are featured in the same order as they are listed in the Gauging Station Register.

In addition a 'Summary of Archived Data' details the river flow and catchment rainfall data held on the NRFA for individual gauging stations and catchments (see pages 165 to 173).

The following explanatory notes are provided to assist in the interpretation of particular items in the tabular material.

Data Presentation

Some slight variations from contributors' figures may occur; these may be due to different methods of computation, differing record lengths or completeness of datasets, or the need for uniformity in presentation. For some gauging stations estimated daily mean flows (but not monthly peak flows) have been included, particularly over the 1996–2000 period, to create more complete datasets – such data are labeled as estimates on the National River Flow Archive.

THE GAUGING STATION REGISTER

Flow measurement stations are normally featured in the Register when they have at least two complete years of river flow data held on the NRFA up to and including 2000. The organisation with operational responsibility for each gauging station is given in the Hydrometric Statistics table.

The quality and completeness of the flow data for individual stations may have changed through time, for instance where a station has been upgraded to primary status. The status of a few featured stations is currently under review; refer to the individual station 'Comment' (see page 11) for further details.

Station Number (NRFA)

The gauging station number is a unique six digit reference number which serves as the primary identifier of the station record on the NRFA. The first digit is a regional identifier being 0 for mainland Britain, 1 for the islands around Britain and 2 for Ireland. This is followed by the Hydrometric Area number given in the second and third digits. Hydrometric Areas are either integral river catchments having one or more outlets to the sea or tidal estuary, or, for convenience, they may include several contiguous river catchments having topographical similarity with separate tidal outlets. In mainland Britain they are numbered from 1 to 97 in clockwise order around the coast commencing in northeast Scotland – see Frontispiece II. Ireland has

* For the EA Midlands Region separate maps have been provided for the Severn and Trent basins – this allows several clusters of gauging stations to be shown with greater clarity.

a unified numbering system from 1 to 40 commencing with the River Foyle catchment and circulating clockwise; not all Irish Hydrometric Areas, however, have an outlet to the coast. The numbers and boundaries of the UK Hydrometric Areas are shown on Frontispiece I and appear on the regional maps.

The fourth, fifth and sixth digits comprise the number, usually allocated chronologically, of the gauging station within the Hydrometric Area. An asterisk following the station number identifies those gauging stations for which no data are held on the NRFA after 1998 – in the majority of cases the stations have been closed or are no longer of primary status. For some, however, flow data have been combined with those for a more recently commissioned – but not necessarily coincident – gauging station.

River Name / Station Name

The river and station name assigned by the appropriate measuring authority. Space constraints require that abbreviations be used for a number of gauging stations; for the majority of monitoring sites the full river and station names are given in the table of Hydrometric Statistics.

Grid Reference

Standard two-letter and six figure map (100 m) reference using the National Grid in Great Britain and the Irish Grid in Northern Ireland. (The Irish Grid has only one prefix letter but it is common practice to precede it with the letter I to make identification clear.)

Catchment Area

The surface catchment area, projected onto a horizontal plane, draining to the gauging station in square kilometres. Most of the quoted areas have been derived using the Institute of Hydrology's Digital Terrain Model (IHDTM)[4] the remainder derive from a variety of sources and are not of uniform precision. Delineation of catchment boundaries can be especially difficult in areas of very subdued relief. The IHDTM utilises information on drainage directions supplied by the measuring agencies to construct catchment boundaries. Errors in the assessment of the areas of small catchments can substantially affect runoff values. There are a substantial number of gauging stations where, because of geological considerations, or as a result of water transfers (for instance, the use of catchwaters to increase reservoir yield), the actual contributing area may differ appreciably from that defined by the topographical boundary. In consequence, the river flows, whether augmented or diminished, may cause the runoff values (as a depth in millimetres) to appear anomalous.

Station Type

The gauging station type is coded by the list of abbreviations given below – two abbreviations may be applied to each station relating to the measurement of low or high flows.

B	Broad-crested weir
C	Crump profile (triangular, 1:2 upstream, 1:5 downstream slopes) single-crest weir
CB	Compound broad-crested weir. The compounding may include a mixture of types such as rectangular profiles, flumes and Flat Vs and with or without divide walls
CC	Compound Crump weir
EM	Electromagnetic gauging station
EW	Essex weir (single Crump weir modified with angled, sloping, triangular profile flanking crests) in trapezoidal channel
FL	Flume
FV	Flat V triangular profile weir (variety of cross slopes 1:10–1:40)
MIS	Miscellaneous
TP	Rectangular thin-plate weir
US	Ultrasonic gauging station
VA	Velocity-area gauging station
VN	Triangular (V notch) thin-plate weir

Period of Record

The first and last year for which daily river flow data are held on the NRFA up to and including 2000. Where the flow record is sensibly continuous (fewer than six missing days occurring in any one year) the first and last years are separated by a dash; otherwise dots are substituted. A detailed breakdown of the data available for each gauging station is given in the Summary of Archived Data (see page 165). Earlier data, often of a sporadic nature or of poorer quality, may occasionally be available from the measuring authority or other sources (see the corresponding station 'Comment'). Areal rainfall data and, particularly, monthly peak flows may not be available for the full period of record.

An 'n' following the period of record indicates that the flow and runoff entries have been derived using naturalised flows.

Emboldening

Where the pre-1996 period of record equals, or exceeds, five complete years, emboldening is used to highlight new maximum and minimum annual and monthly runoff totals or river flows established during the 1996–2000 period.

Mean Annual Rainfall

The average annual rainfall over the catchment in millimetres. Generally the mean relates to the period of record given in the previous column (rainfall data preceding the start of the corresponding river flow record are ignored); the mean rainfall is shown in italics where monthly catchment rainfall totals are available for less than 80 per cent of the corresponding runoff record.

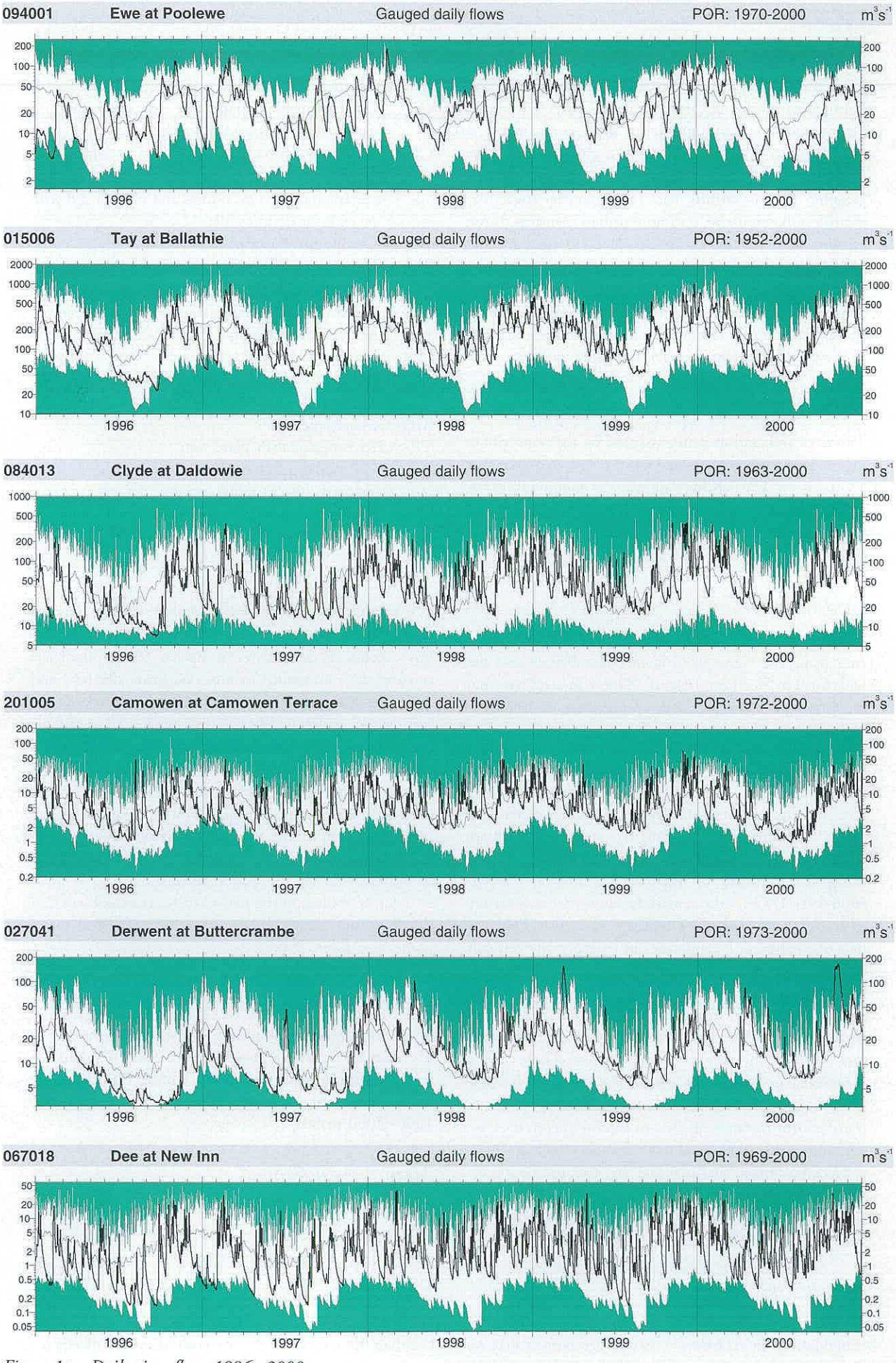

Figure 1a Daily river flows 1996–2000

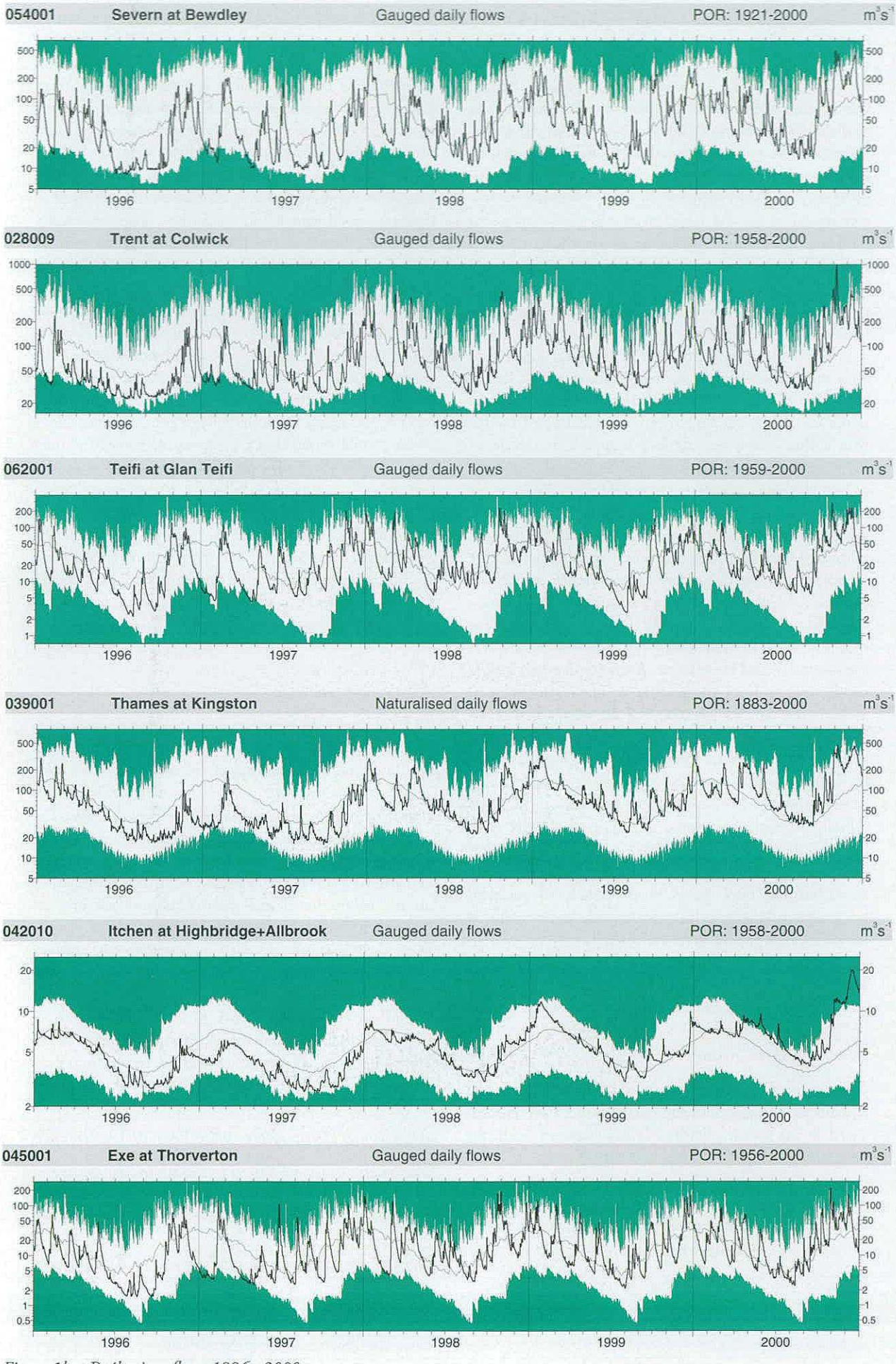

Figure 1b Daily river flows 1996–2000

The mean annual rainfall is derived from the monthly catchment rainfall totals held on the NRFA. Beginning with January 1986 these totals have been derived from a one kilometre square grid of rainfall values generated from all daily and monthly rainfall data available from the Met Office. The method used conforms with that recommended in the British Standard's Institution's Guide to the Acquisition and Management of Meteorological Precipitation Data[5]. Validation procedures allow for the rejection of obviously erroneous raingauge observations prior to the gridding exercise. A computer program then calculates catchment rainfall by averaging the values (either in millimetres or as percentages of the 1961–90 average) at the grid points lying within the digitised catchment boundary*.

Up to and including 1985, monthly catchment areal rainfall totals were normally computed by, firstly, obtaining the long period (1941–70) average annual rainfall for each catchment – this was derived by the Met Office based on isohyets mapped at a scale of 1:250,000. Then, for each of a selected number of raingauges chosen to represent the catchment, the monthly rainfall was expressed as a percentage of its annual average rainfall. The percentage values of rainfall for each raingauge were summed and their mean obtained to give a catchment percentage value for the month, which was then converted to monthly mean rainfall.

The mean annual rainfall is computed from the monthly mean rainfalls using data only for years where the rainfall record is complete. Accuracy depends largely on the reliability of the assessment of the areal annual average and on the adequacy of the network of raingauges used to represent an area. Where, as for instance in some mountainous catchments, raingauges are few, their siting and exposure is not ideal, and particularly where snowfall is common, great precision in the areal rainfall assessments cannot be expected. Under such circumstances rainfall can often be significantly underestimated. More generally, some underestimation of mean rainfall may occur – the catch of standard raingauges is known to be systematically lower than that for co-located ground-level raingauges.

Changes in the raingauge network can affect the accuracy of the monthly catchment rainfall totals and the homogeneity of the time series.

Mean Annual Runoff

The notional depth of water in millimetres over the catchment equivalent to the mean annual flow as measured at the gauging station. It is computed using the relationship:

$$\text{Runoff in mm} = \frac{\text{Mean Flow in cubic metres per second} \times 86.4 \times 365}{\text{Catchment Area (km}^2\text{)}}$$

The total runoff is rounded to the nearest millimetre.

* Note: This method has also been used to fill gapes in the earlier catchment rainfall record.

As a consequence of missing data there will not be full equivalence between the mean annual rainfall and the mean annual runoff for some catchments. Runoff statistics and the corresponding mean flow are computed on the basis of naturalised flows for the minority of catchments where sensibly continuous daily, or monthly, naturalised data are held on the NRFA. Naturalised flows are derived from the corresponding gauged discharges by taking account of the net affect of upstream abstractions and discharges. The uncertainty in the magnitude of the necessary adjustment may be considerably greater than the uncertainty associated with the gauged flow.

The net impact of abstractions and discharges may result in unrepresentative mean annual runoff figures. More commonly, a lack of coincidence between the topographical catchment divide and the true extent of the contributing area (which may be substantially different for permeable catchments) can produce anomalous mean annual runoff totals. Note also that measurement limitations – especially precipitation assessments in very wet upland catchments – may give rise to runoff which approaches, or even exceeds, the corresponding catchment rainfall. Guidance as to how representative the mean annual runoff is of the natural flow regime may be found in the Factors Affecting Runoff (F.A.R.) codes (see page 10) and the 'Comment' section in the Hydrometric Statistics tables (see page 11).

Mean Annual Loss

The difference between the mean annual catchment rainfall and the mean annual catchment runoff. Entries are confined to catchments where there is good agreement between the periods for which rainfall and runoff are held on the National River Flow Archive. The mean annual loss provides a guide to average annual evaporative losses but limited precision in the rainfall and runoff figures, the net effect of artificial influences on the mean runoff and, particularly, a lack of congruency between the topographic and the true catchment areas (see above) may all combine to produce unrepresentative mean losses. For those few catchments where computed mean runoff exceeds computed mean rainfall no mean annual loss is given. The F.A.R. codes (see page 10) and the relevant 'Comment' section in the Hydrometric Statistics tables should be consulted to assess the credibility of the featured mean annual losses.

Maximum Annual Runoff / Year of Occurrence

The maximum calendar year runoff in the period of record. The selection is based only on those years with complete flow records on the NRFA.

Minimum Annual Runoff / Year of Occurrence

The minimum calendar year runoff in the period of record. The selection is based only on those years with complete flow records on the NRFA.

Mean Flow

The average, weighted to account for the different number of days per month, of the mean monthly flows for the period of record.

Minimum Monthly Flow / Month and Year of Occurrence

The minimum monthly mean flow in the period of record; where the minimum recurs, the latest occurrence is featured. Minimum monthly flows greater than zero but less than 0.005 m^3s^{-1} appear as '>0.0'. It should be emphasised that river flow measurement tends to become more imprecise at very low discharges. Very low velocities, heavy weed growth and the insensitivity of stage-discharge relations combine with the difficulty of accurately measuring limited water depths to increase the uncertainty associated with the computed flows.

Median Annual Flood (QMED)

The median of the annual peak discharges in the period of record. Generally, QMED has been computed using a dataset compiled originally as part of the Flood Studies project[6] and updated during the Flood Estimation Handbook project[2]; significant further updating remains to be done. QMED values have been computed only when at least five water-year (October–September) peaks have been recorded. In the FSR (and previous Hydrometric Register and Statistics volumes), the mean annual flood (QBAR) was used as the index flood. QMED is now preferred because it is unaffected by the size of an exceptionally large flood event and can be directly interpreted as the two-year return period. For a few stations (indicated by an asterisk following the QMED value) the QMED has been determined on the basis of the highest daily mean flows. The QMED has been omitted for some stations where catchment changes – normally the construction of a major reservoir – make the computed QMED unrepresentative of current conditions.

Accurate high flow measurement can present severe logistical and hydrometric difficulties and flood discharges may often be based on substantial extrapolations of the stage-discharge relation. The precision may vary greatly from station to station; some relevant additional information may be found in the station 'Comment' section (see page 11).

Base Flow Index

The Base Flow Index (BFI) was developed at the Institute of Hydrology (now CEH Wallingford) during the Low Flow Study to help assess the low flow characteristics of rivers in the United Kingdom (for details of the procedures used to compute the BFI, see Gustard *et al.*, 1992[7]). In this volume, the BFI has been computed using the archived record of gauged daily mean flows and may be thought of as a measure of the proportion of the river runoff that derives from stored sources; the more permeable the rock, drift and soil material of a catchment the higher the baseflow and the more sustained the river's flow during periods of dry weather. Thus, the BFI is an effective means of indexing catchment geology. For instance, rivers draining impervious clay catchments (with minimal lake or reservoir storage) typically have baseflow indices in the range 0.15 to 0.35, whereas a Chalk stream may well have a BFI greater than 0.9 as a consequence of the high groundwater component in the river discharge.

10 Percentile

The flow in cubic metres per second which was equalled or exceeded for 10 per cent of the specified term – a high flow parameter which, when compared with the mean, may give a measure of the variability, or 'flashiness', of the flow regime. The 10 percentile is computed using daily flow data only for those years with five days, or less, missing on the NRFA.

95 Percentile

The flow in cubic metres per second which was equalled or exceeded for 95 per cent of the specified term; a significant low flow parameter particularly relevant in the assessment of river water quality consent conditions. The same conditions for completeness of the annual records apply as for the 10 percentile flow. Ninety-five percentile flows greater than zero but less than 0.005 m^3s^{-1} appear as '>0.0'.

The reliability of the 95 percentile flows – as with the minimum monthly mean – must be considered carefully as representative measures of low flow. The values should be used with caution in view of the problems associated with both the measurement of very low discharges and the increasing proportional variability between the natural flow and the artificial influences, such as abstractions, discharges and storage changes as the river flow diminishes.

HYDROMETRIC STATISTICS

Flow measurement stations are, generally, featured in this section where at least three complete years of data are available on the NRFA over the period 1996–2000. A significant minority of the stations which appear in the Gauging Station Register have been omitted from the Hydrometric Statistics section. These include stations decommissioned prior to 1996, those where the hydrometric data are of poor quality, or because of the limited value to the national network of a particular gauging site; e.g. a gauging station immediately below a reservoir.

Certain key reference details are repeated from the Register of Gauging Stations. See page 5 for details of the Station Number, Station Name and Catchment Area.

Measuring Authority – M.A.

An abbreviation referencing the organisation responsible for the operation of the gauging station. A list of measuring authority codes together with the full name and address of the organisation is given in the Directory of Measuring Authorities (page 201).

Local Number.

The station reference number adopted by the measuring authority, for a few areas truncation has been necessary due to space constraints. For some regions the local number is identical to the NRFA station number.

Station Sensitivity – Sens.

The percentage change in flow associated with a 10 mm increase in stage at the 95% exceedance flow; the higher the sensitivity, the greater the error in computed flow associated with systematic errors in flow measurement. The limited depth of many UK rivers, especially during periods of low flow, places a premium on the accurate measurement of water levels. Systematic errors in the measurement of stage – resulting, for instance, from imprecise datum settings, algal growth on weir crests or ice on natural controls – are the major factor influencing discharge uncertainty. The sensitivity index provides a guide to the susceptibility of low flows at individual stations to errors arising from imprecise stage measurement; commonly these produce an overestimation of flows.

B-full (Bank-full) / S-full (Structure-full)

The flow in cubic metres per second at which the river begins to overlap the banks, or the wingwalls of a structure, at a gauging station. The discharges have been obtained from stage-discharge relations and since they are at the upper limit of the in-bank flow they may be derived by extrapolation. At a few weirs and flumes, the upstream channel capacity may be less than the capacity of the structure. Under such circumstances bypassing will commence before structurefull is reached.

This item is unavailable for a substantial number of gauging stations and may be omitted where the bankfull and structurefull discharges are considered unreliable.

Factors Affecting Runoff – F.A.R.

An indication of the various types of abstractions from, and discharges to, the river operating within the catchment which alter the natural flow is given by a standard set of code letters. For some areas the allocation of F.A.R. codes is incomplete and for all catchments the codes are subject to continuing review. The absence of F.A.R. codes does not imply a natural flow regime. An explanation of the code letters is given below. With the exception of the induced loss in surface flow resulting from underlying groundwater abstraction, these codes and descriptions refer to quantifiable variations and do not include the progressive, and difficult to measure, modifications in the regime related to land-use changes.

Except for a small set of gauging stations for which the net variation, i.e. the sum of abstractions and discharges, is assessed in order to derive the 'naturalised' flow from the gauged flow (see page 8), the record of individual abstractions, discharges and changes in storage as indicated in the code above is not held centrally.

CODE EXPLANATION

N Natural, i.e. there are no abstractions and discharges or the variation due to them is so limited that the gauged flow is considered to be within 10% of the natural flow at, or in excess of, the 95 percentile flow.

Storage or impounding reservoir. Natural river flows will be affected by water stored in a reservoir situated in, and supplied from, the catchment above the gauging station.

R Regulated river. Under certain flow conditions the river will be augmented from surface water and/or groundwater storage upstream of the gauging station.

Public water supplies. Natural river flows are reduced by the quantity abstracted from a reservoir or by a river intake if the water is conveyed outside the gauging station's catchment area.

Groundwater abstraction. Natural river flow may be reduced or augmented by groundwater abstraction or recharge. This category includes catchments where mine-water discharges influence the flow regime.

Effluent return. Outflows from sewage treatment works will augment the river flow if the effluents originate from outside the catchment.

Industrial and agricultural abstractions. Direct industrial and agricultural abstractions from surface water and from groundwater may reduce the natural river flow.

F Hydro-electric power. The river flow is regulated to suit the need for power generation; catchment to catchment diversions may also significantly affect average runoff.

Level

The level of the station: generally, the level of the gauge zero in metres above Ordnance Datum, or above Malin Head Datum for stations in Northern Ireland. Although gauge zero is usually closely related to zero discharge, it is the practice in some areas for an arbitrary height, typically one metre, to be added to the level of the lowest crest of a measuring structure to avoid the possibility of false recording of negative values by some digital recorders.

Urban Extent – UE

A measure of the extent of urban and suburban land cover in each catchment derived from the Centre of Ecology and Hydrology's Land Cover Map[8]. The Urban Extent index lies between 0 and 1 and is a composite of the urban and suburban fractions (the latter being weighted by 0.5). It corresponds to the URBEXT index developed for the Flood Estimation Handbook[2].

Flood Attentuation Index – FAI

All lakes and reservoirs in a catchment affect flood response to some degree. This index takes account of each on-line lake or reservoir, and its position in the catchment (those in the headwaters having a lesser effect than those close to the gauging station), to provide a measure of their overall attenuation effect. The index lies in the range 0 to 1, with the attenuation effect diminishing as the value approaches unity. In some cases, the algorithm used to calculate the index treats water bodies close to the river (e.g. floodplain gravel pits) as on-line. In all cases, the values derive from water bodies shown on the 1:50,000 Ordnance Survey maps. The FAI corresponds to the index of flood attenuation by reservoirs and lakes (FARL) developed for the Flood Estimation Handbook[2] – reference to which should be made for further details of its derivation.

Comment

A short commentary providing a guide to the characteristics of the station, its flow record and the catchment it commands; the catchment description is normally separated from the rest of the material by a '#' symbol. The objectives of this summary information are to assist data users in the selection of gauging station records appropriate to their needs and to assist in the interpretation of flow data for individual gauging stations particularly where the natural flow pattern is significantly disturbed by artificial influences.

The 'Comment' is under continuing review – reflecting the availability of more information and in response to changing hydrometric conditions at the measuring site, and changing water use and land use within the catchment (date of last revisions: August 2002).

Reference to the Glossary should be made for an explanation of technical terms, abbreviations and acronyms used in the Comment section.

1996–2000 Hydrometric Statistics

Hydrometric statistics are presented both for the period of record, up to and including, 1995* and for each calendar year 1996 to 2000. Rainfall and runoff data for individual years are featured only where a sensibly complete annual record is held on the NRFA (see below). Period of record statistics are given only if at least five years of pre-1996 data are held on the NRFA. Peak or minimum flow data may be featured for incomplete years provided the featured extreme flows may reasonably be expected not to have been eclipsed over the period for which directly measured flows are not available. In a few cases – indicated by an 'f' flag – the pre-1996 peak flow has been taken from the Flood Estimation Handbook (see pages 9 and 12).

When comparing period of record values with those given in the Gauging Station Register it should be noted that the figures given in the latter table relate to the full period of record up to and including 2000. This allows the impact of the 1996–2000 rainfall and runoff patterns on the long term averages to be examined.

Emboldening

The period of record statistics are shown emboldened where they are based on five or more complete years of data. Emboldening is also used to highlight new maximum or minimum flows established over the 1996–2000 period.

Period

The range of years on which the period of record statistics are based. Normally the end year is 1995 but for some recently decommissioned gauging stations an earlier year may be given. Where the flow record is sensibly continuous (less than six missing days occurring in any single year) the first and last years are separated by a dash; otherwise dots are substituted.

Rainfall

The rainfall over the catchment for each year and for the period of record (see page 5 for the method of derivation). '% of pre-1996' expresses the individual yearly totals as a percentage of the period of record average. The period of record rainfall is italicised where data cover a significantly different period to that for the runoff data.

Runoff

The catchment runoff for each year and for the period of record. '% of pre-1996' expresses the individual yearly totals as a percentage of the period of record average. Generally, gauged flows have been used to compute runoff totals but for a few gauging stations – those flagged in the Gauging Station Register – runoff has been computed using naturalised flows. Runoff totals for individual years are featured only where there are five, or fewer, missing days in the year; the annual totals for incomplete years are italicised (and are based on the average flow on the days for which data are available on the NRFA).

* Underlining is used to identify those flow records commencing before 1900.

Mean Flow

The POR mean flow is based on all available pre-1996 daily mean gauged flows; for the method of computation see page 9. The same conditions for completeness apply to the individual annual mean flows as for runoff.

Peak Flow / Date of Peak

The peak flow in cubic metres per second during the term indicated together with the date of occurrence, normally the water-day (which commences at 09.00 hours). Where the peak flow recurs, the date normally corresponds to the last occurrence. Generally, the peak flows are derived from the record of monthly instantaneous maximum flows stored on the NRFA. Some peak flows for years with incomplete flow data have been included (where, for example, they exceed the pre-1996 peak flow); such entries appear in italics. Where instantaneous flows are not recorded or where the peak value in an incomplete series is exceeded by the highest daily mean flow, the latter is substituted; such substitutions are indicated by a 'd' flag. A similar approach may be used where the peaks are considered to be especially unreliable (for example where local processing procedures provide for peak flows to be truncated at the maximum value of the stage-discharge relationship). As a result of particular flow measurement difficulties in the flood range, the peak flow series (on the NRFA) is often incomplete and the recorded discharges may be of limited accuracy. Reviews of high flow data in many parts of the United Kingdom are currently being undertaken. Some revised peak flows resulting from these reviews are featured in the Hydrometric Statistics Tables.

Reference to the reprint of Volume IV of the Floods Study Report[6] or the Flood Estimation Handbook[2] should be made to check for historical flood events which may exceed the peak falling within the gauged flow record. An excellent source of additional historical river-flow (and groundwater)-information is the British Hydrology Society's Chronology of British Hydrological Events website:

http://www.dundee.ac.uk/geography/cbhe/

Note: Monthly peak flows are stored on the NRFA primarily to provide a guide to the range of flows expected at individual monitoring sites. They are not subject to the degree of quality control applied to the daily flow values and the precision of the peak flows is very variable. Caution should therefore be exercised in interpreting the featured values – particularly those associated with the widespread flooding in late-2000; some of the peak flows remain provisional, most should be regarded as estimates.

Minimum Daily Flow / Date of Minimum

The value and date of occurrence of the lowest daily (normally, a water-day) mean flow in cubic metres per second during the term indicated. In a record in which the value recurs, the date is that of the last occasion. Estimated flow values are identified by a question mark.

Percentiles: 10%, 50% and 95%

The flow in cubic metres per second which was equalled or exceeded for the specified percentage of the term indicated. See page 9 for details of the computation of the 10 and 95 percentiles; the 50 percentile is also known as the median value.

References

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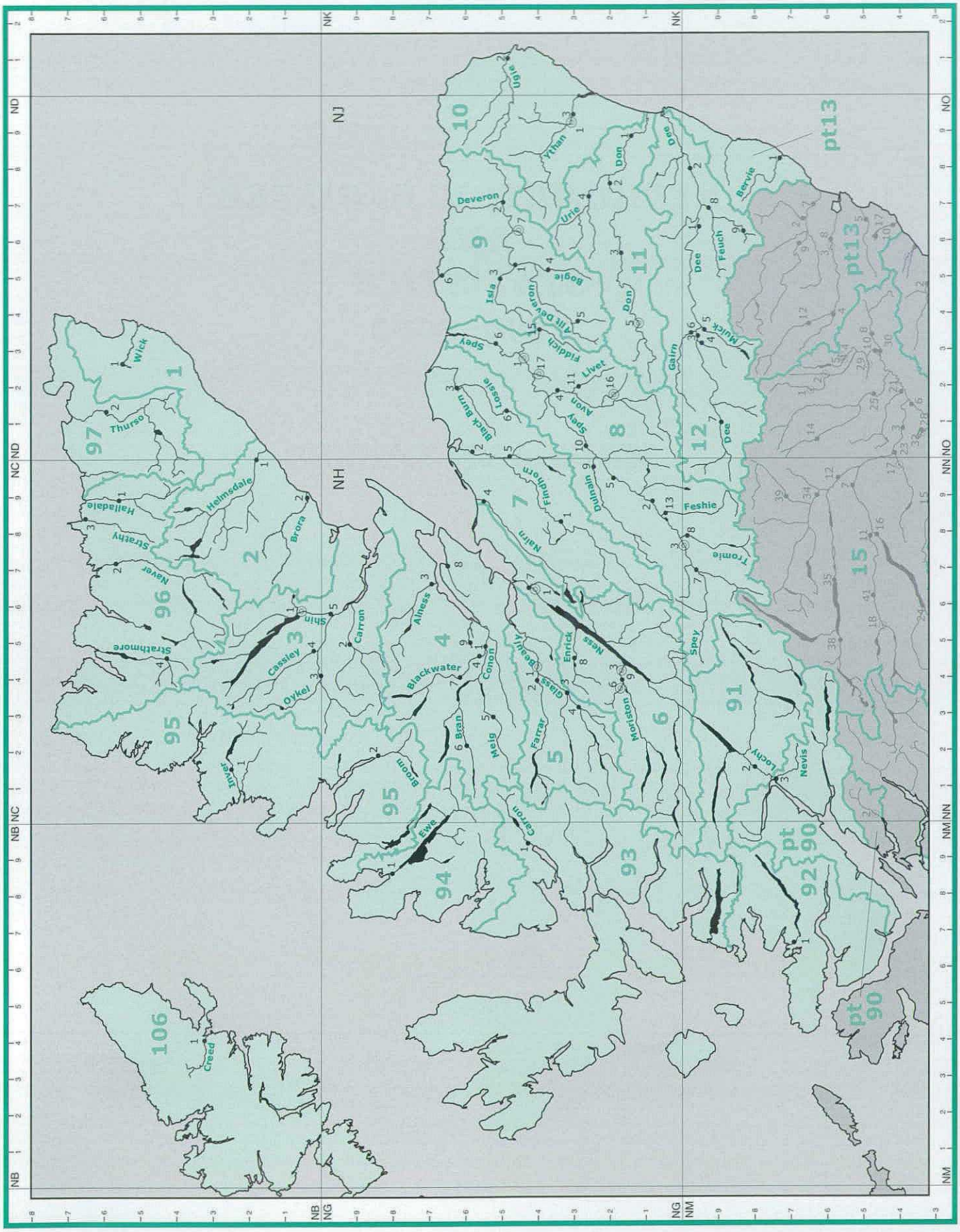
HYDROMETRIC REGISTER AND STATISTICS 1996–2000

MAPS AND TABLES

Map 1: SEPA — NORTH



Area: 33,530 km^2

Average Rainfall (1961–90): 1516 mm

Gauging Station Register

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m³s⁻¹)	Min. mon. flow (m³s⁻¹)	Month/Year of min.	Median ann. flood (m³s⁻¹)	Base Flow Index	10 Percentile (m³s⁻¹)	95 Percentile (m³s⁻¹)
001001	Wick	Tarroul	ND 262549	161.9	VA	1995–00	993	598	395	764	98	480	97	3.07	0.11	08/96		.38	7.9	0.12
002001	Helmsdale	Kilphedir	NC 997181	551.4	VA	1975–00	1125	745	380	**958**	**98**	496	89	13.03	2.17	09/89	179.3	.47	28.9	3.10
002002	Brora	Bruachrobie	NC 892039	434.4	VA	1993–00	1319	929	390	1103	98	660	96	12.80	0.46	08/95		.30	33.0	0.83
003001 *	Shin	Lairg	NC 581062	494.6	VA	1953–57	1525	956	569	1238	54	836	55	14.99	0.66	08/55	62.8	.60	33.4	1.89
003005	Shin	Inveran	NH 574974	575.0	VA	1981–00	1624	251	1373	**394**	**00**	**172**	**97**	4.57	1.49	11/93		.64	5.5	1.64
003003	Oykel	Easter Turnaig	NC 403001	330.7	VA	1977–00	2022	1573	449	1931	81	**1085**	**96**	16.50	0.75	06/82	374.9	.23	40.2	1.06
003004	Cassley	Rosehall	NC 472022	187.5	VA	1979–00	2235	1216	1019	1655	81	**847**	**96**	7.23	0.46	06/82		.23	17.0	0.72
003002	Carron	Sgodachail	NH 490921	241.1	VA	1974–00	1952	1189	763	1596	90	**787**	**96**	9.09	0.77	08/95	193.5	.30	21.0	0.95
004003	Alness	Alness	NH 654695	201.0	VA	1974–00	1451	973	478	**1304**	**98**	671	76	6.20	0.51	08/76	83.9	.44	13.7	0.84
004006	Bran	Dosmucheran	NH 205602	116.1	VA	1989–00	2376	1937	439	2564	90	**1252**	**96**	7.13	0.34	06/92		.28	17.9	0.50
004005	Meig	Glenmeannie	NH 286528	120.5	VA	1986–00	2349	1828	521	2414	90	**1116**	**96**	6.99	0.49	06/92		.25	16.9	0.56
004007	Blackwater	Garve	NH 396617	289.0		1989..00	1851	551	1300	805	92	328	96	5.05	1.40	07/92		.36	11.9	1.12
004004	Blackwater	Contin	NH 455563	336.7	VA	1981–00	1708	574	1134	818	92	**367**	**96**	6.12	1.40	07/92		.40	13.4	1.46
004001	Conon	Moy Bridge	NH 482547	961.8	VA	1947..00	1855	1601	254	2541	90	983	63	48.82	2.96	07/49	312.0	.58	96.1	10.08
004009	Peffery	Strathpeffer STW	NH 492586	17.3	VA	1995..99	1136	417	719	580	98	292	96	0.23	0.03	08/97		.41	0.4	0.01
004008	Newhall Burn	Newhall Bridge	NH 702652	41.0	VA	1996..00	882	423	459	486	98	372	97	0.55	0.04	09/96		.45	1.2	0.05
005004	Glass	Fasnakyle	NH 315288	277.5	VA	1990–00	2382	538	1844	**663**	**99**	**394**	**96**	4.74	**0.98**	**08/99**		.41	9.5	1.06
005003	Glass	Kerrow Wood	NH 354321	481.8	VA	1988–00	2467	2159	308	2739	90	**1210**	**96**	32.99	7.22	05/91		.55	63.0	9.00
005002	Farrar	Struy	NH 390405	311.3	VA	1986–00	2338	2011	327	2753	90	**1133**	**96**	19.85	**5.99**	**08/96**		.56	42.9	6.17
005001 *	Beauly	Erchless	NH 426405	849.5	VA	1953–62	2194	1694	500	2057	54	1294	60	45.64	7.69	08/55	316.1	.50	82.8	13.70
006006 *	Allt Bhlaraidh	Invermoriston	NH 377168	27.5	CB	1953–62	1653	1009	644	1226	54	765	55	0.88	0.02	08/55	16.7	.30	2.1	0.06
006003 *	Moriston	Invermoriston	NH 416169	391.0	VA	1929–45		1674		2637	38	1168	33	20.75	1.69	06/32	313.6	.30	50.3	1.85
006009	Moriston	Levishie	NH 404175	403.1	VA	1994–00	*2242*	607	1635	1430	98	239	96	7.76	0.89	11/97		.45	23.5	0.84
006008	Enrick	Mill of Tore	NH 450300	105.9	VA	1979–00	1449	989	460	1486	90	**531**	**96**	3.32	0.01	08/95	49.7	.30	8.6	0.07
006001 *	Ness	Ness Castle Frm	NH 639410	1792.3	VA	1935..63	1755	1298	457	1829	38	875	37	73.78	8.19	08/55	370.7	.54	154.0	12.05
006007	Ness	Ness-side	NH 645427	1839.1	VA	1973–00	1917	1536	381	2255	90	**917**	**96**	89.59	12.46	08/84	372.1	.61	184.9	19.46
007004	Nairn	Firhall	NH 882551	313.0	VA	1979–00	1024	568	456	749	90	**316**	**96**	5.64	0.55	08/95		.45	12.3	0.84
007001	Findhorn	Shenachie	NH 826337	415.6	VA	1960–00	1264	1048	216	1450	90	628	72	13.81	1.43	08/84	239.7	.36	31.4	2.03
007005	Divie	Dunphail	NJ 005480	165.0	VA	1977..00	900	538	362	724	85	331	89	2.81	0.38	08/95		.43	5.9	0.51
007002	Findhorn	Forres	NJ 018583	781.9	VA	1958–00	1099	776	323	**1051**	**00**	484	72	19.23	2.47	08/95	358.9	.40	42.2	3.25
007006	Lossie	Torwinny	NJ 135489	20.0	VA	1987–00	937	577	360	741	88	**397**	**96**	0.37	0.08	08/95		.45	0.7	0.10
007003	Lossie	Sheriffmills	NJ 194626	216.0	VA	1963..00	830	384	446	583	66	182	72	2.63	0.49	08/76	40.5	.52	5.0	0.71
008007	Spey	Invertruim	NN 687962	400.4	VA	1952–00	1493	465	1028	876	90	310	87	5.90	0.85	08/84	95.9	.52	10.0	1.56
008003 *	Spey	Ruthven Bridge	NN 759996	533.8	VA	1951–73	1364	551	813	836	54	420	69	9.32	1.68	08/55	102.3	.51	18.1	2.73
008008	Tromie	Tromie Bridge	NN 789995	130.3	VA	1952..00	1435	609	826	1045	90	394	87	2.52	0.52	08/84	58.8	.61	3.8	1.20
008013	Feshie	Feshie Bridge	NH 849047	231.0	VA	1992–99	1373	1083	290	1227	94	790	96	7.93	1.10	08/95		.48	16.0	1.69
008002	Spey	Kinrara	NH 881082	1011.7	VA	1951–00	1338	698	640	1083	90	474	55	22.38	3.04	08/84	134.7	.55	44.5	5.84
008005	Spey	Boat of Garten	NH 946191	1267.8	VA	1951–00	1286	727	559	1059	90	477	55	29.22	5.18	08/55	158.2	.60	55.4	8.58
008009	Dulnain	Balnaan Bridge	NH 977247	272.2	VA	1952..00	1012	691	321	**930**	**00**	411	72	5.96	0.74	08/84	101.3	.45	12.9	1.08
008010	Spey	Grantown	NJ 033268	1748.8	VA	1953–00	1192	679	513	934	90	**477**	**96**	37.63	7.02	08/95	245.8	.59	72.6	10.61
008016 *	Conglass Water	Auchriachan	NJ 175191	40.8	VA	1992–95	992	621	371	649	94	633	93	0.80	0.21	08/94		.56	1.6	0.23
008011	Livet	Minmore	NJ 201291	104.0	VA	1978..00	1014	667	347	**888**	**00**	380	89	2.20	0.64	08/94	30.3	.64	4.0	0.76
008004	Avon	Delnashaugh	NJ 186352	542.8	VA	1952–00	1079	845	234	1120	66	513	89	14.55	2.87	08/76	224.7	.56	27.3	4.07
008017 *	Carron Burn	Dailuaine	NJ 237415	15.2	VA	1991–94	834	560	274	602	93	481	92	0.27	0.06	09/91		.44	0.5	0.07
008001 *	Spey	Aberlour	NJ 278439	2654.7	VA	1938..74	*1094*	669	425	840	54	488	64	56.28	9.95	08/55	407.9	.58	105.2	16.86
008015 *	Fiddich	Auchindoun	NJ 355399	44.5	VA	1991..98	1036	659	377	882	98	582	96	0.93	0.25	08/94		.57	1.8	0.29
008006	Spey	Boat o Brig	NJ 318518	2861.2	VA	1952–00	1122	717	405	**946**	**00**	487	72	65.05	11.31	08/55	517.0	.60	122.5	19.01
009006 *	Deskford Burn	Cullen	NJ 504667	46.5	VA	1989..98	797	328	469	441	95	277	90	0.48	0.05	08/95		.47	1.0	0.08
009005	Allt Deveron	Cabrach	NJ 378291	67.0	CB	1948..00	1067	733	334	**1034**	**00**	395	89	1.56	0.35	09/59		.50	3.0	0.43
009004	Bogie	Redcraig	NJ 519373	179.0	VA	1980–00	983	538	445	**770**	**00**	236	89	3.06	0.75	08/94	23.1	.69	5.8	0.88
009001	Deveron	Avochie	NJ 532464	441.6	VA	1959–00	994	618	376	888	60	289	89	8.65	1.62	08/76	119.2	.59	18.4	2.25
009003	Isla	Grange	NJ 494506	176.1	VA	1969–00	874	475	399	761	85	231	89	2.65	0.37	08/76	41.6	.53	5.3	0.57
009002	Deveron	Muiresk	NJ 705498	954.9	VA	1960–00	928	542	386	761	85	249	89	16.42	2.58	08/76	230.4	.57	32.3	3.60
009007 *	Forgue Burn	Inverkeithny	NJ 627469	88.3	VA	1990..95	849	321	528	346	94	315	91	0.90	0.14	08/94		.72	2.0	0.17
010002	Ugie	Inverugie	NK 101485	325.0	VA	1971–00	807	453	354	**687**	**98**	201	89	4.67	0.86	08/76	41.0	.64	9.2	1.09
010001 *	Ythan	Ardlethen	NJ 924308	448.1	VA	1965–82	850	473	377	676	66	258	73	6.72	1.17	08/76	48.6	.72	13.4	1.59
010003	Ythan	Ellon	NJ 947303	523.0	VA	1983–00	829	475	354	**754**	**98**	169	89	7.88	1.25	08/84	63.3	.73	15.9	1.68
011005 *	Don	Mill of Newe	NJ 371121	187.0	MIS	1989–94	951	670	281	738	91	608	92	3.97	1.28	08/89		.67	6.8	1.34
011003	Don	Bridge of Alford	NJ 566170	499.0	VA	1973–00	992	641	351	**883**	**00**	331	89	10.14	2.43	08/76	92.9	.68	18.8	3.16
011002	Don	Haughton	NJ 756201	787.0	VA	1969–00	921	568	353	**814**	**00**	268	89	14.17	3.31	08/76	106.1	.67	27.6	4.01
011004	Urie	Pitcaple	NJ 721260	198.0	VA	1989–00	863	458	405	**693**	**00**	194	89	2.88	0.69	08/94	19.9	.75	5.5	0.78
011001	Don	Parkhill	NJ 887141	1273.0	VA	1969–00	891	502	389	723	85	219	89	20.25	4.57	10/72	118.8	.69	39.9	5.39
012007	Dee	Mar Lodge	NO 098895	289.0	VA	1982–00	1442	1355	87	**1702**	**00**	**1032**	**96**	12.42	1.16	08/84	196.3	.45	25.6	1.99
012004	Gimock Burn	Littlemill	NO 324956	30.3	VA	1969..00	997	546	451	**840**	**00**	297	73	0.52	0.02	06/92	21.8	.38	1.1	0.04
012003	Dee	Polhollick	NO 344965	690.0	VA	1975–00	1308	1077	231	**1412**	**00**	842	89	23.57	2.83	08/83	311.6	.50	49.0	4.59
012006	Gairn	Invergairn	NO 353971	150.0	VA	1978–00	1024	818	206	**1129**	**00**	492	89	3.89	0.61	08/84	58.7	.54	7.5	0.82
012005	Muick	Invermuick	NO 364947	110.0	VA	1976..00	1335	1077	258	**1482**	**00**	722	89	3.76	0.35	08/95	66.8	.50	7.4	0.61
012001	Dee	Woodend	NO 635956	1370.0	VA	1929–00	1125	848	277	**1207**	**00**	557	73	36.84	4.67	08/95	428.6	.54	73.6	8.25
012009	Water of Dye	Charr	NO 624834	41.7	F	1957..00	1276	987	289	1235	88	759	92	1.30	0.12	08/95		.38	2.7	0.18
012008	Feugh	Heugh Head	NO 687928	229.0	VA	1985–00	1151	784	367	**1063**	**00**	388	89	5.70	0.58	08/94	137.5	.45	11.4	0.87
012002	Dee	Park	NO 798983	1844.0	VA	1972–00	1113	801	312	**1070**	**00**	462	73	46.85	5.94	08/76	572.2	.53	96.4	8.58
013001	Bervie	Inverbervie	NO 826733	123.0	VA	1979–00	906	535	371	802	84	225	89	2.09	0.31	09/94	37.0	.54	4.3	0.34
090003	Nevis	Claggan	NN 116742	76.8	VA	1982–00	3133	2714	419	3722	90	**1833**	**96**	6.61	0.74	02/86		.26	16.2	0.63
091002	Lochy	Camisky	NN 145805	1252.0	VA	1980–00	2457	1545	912	2334	90	**818**	**96**	61.34	3.85	06/88	741.5	.39	156.3	5.41
092001	Shiel	Shielfoot	NM 666702	256.0	VA	1995–00	3017	2568	449	3036	99	2069	96	20.85	3.63	06/97		.60	44.7	3.34
093001	Carron	New Kelso	NG 942429	137.8	VA	1979–00	2824	2515	309	3375	90	**1728**	**96**	10.99	0.70	05/80	187.3	.26	27.0	1.03
094001	Ewe	Poolewe	NG 859803	441.1	VA	1970–00	2475	2128	347	2961	92	1386	72	29.76	3.73	06/88	125.7	.64	63.6	5.49
095002	Broom	Inverbroom	NH 184842	141.4	VA	1985–00	2167	1647	520	2560	90	**945**	**96**	7.39	0.44	06/92		.26	17.9	0.55
095001	Inver	Little Assynt	NC 147250	137.5	VA	1977–00	2226	1947	279	2502	90	**1452**	**96**	8.49	1.66	05/80		.64	16.5	1.86
096004	Strathmore	Allnabad	NC 453429	105.0	VA	1987–00	2628	2237	391	2826	90	**1611**	**96**	7.45	**0.59**	**08/99**		.20	18.3	0.46

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
096002	Naver	Apigill	NC 713568	477.0	VA	1977–00	1475	1049	426	1308	90	772	96	15.86	0.52	07/92	153.6	.43	37.0	1.22
096003	Strathy	Strathy Bridge	NC 836652	111.8	VA	1985–00	1123	764	359	1020	90	589	91	2.71	0.14	08/95		.30	6.5	0.19
096001	Halladale	Halladale	NC 891561	204.6	VA	1976–00	1148	782	366	991	98	513	89	5.08	0.19	08/83	140.1	.26	13.1	0.27
097002	Thurso	Halkirk	ND 131595	412.8	VA	1972–00	1071	674	397	920	98	392	89	8.82	0.31	07/76	107.1	.46	20.6	0.58
106001	Creed	Creed Bridge	NB 403325	43.4	CC	1993..00	1588	1304	284	1494	99	1368	00	1.79	0.14	05/98			4.4	0.15

Hydrometric Statistics

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
001001	**Wick at Tarroul** C.A: 161.9 km²	95..95						21.8	27/11 1995	1.23	18/12 1995			
M.A: SEPA-N	Local No: Sens.:													
F.A.R:	Level: m UE: FAI:													
Comment: Velocity-area station with cableway in relatively straight (formalised) section. Rarely by-passed; MAF probably contained. Natural flow regime. # Relatively dry and flat catchment given over largely to agriculture (arable and pasture).		1996	898		524		2.68	39.6	04/11	0.04	28/09	7.6	1.00	0.06
		1997	933		480		2.47	35.3	16/03	0.07	02/10	6.4	1.11	0.10
		1998	1173		764		3.92	36.3	16/10	0.13	05/06	9.1	2.76	0.22
		1999	1003		660		3.39	24.5	25/12	0.19	11/08	8.6	2.13	0.33
		2000	954		631		3.23	26.6	27/04	0.11	08/08	7.7	2.12	0.13
002001	**Helmsdale at Kilphedir** C.A: 551.4 km²	**75-95**	**1102**		**732**		**12.80**	**286.9**	**06/10 1993**	**0.81**	**05/09 1976**	**28.0**	**7.87**	**3.05**
M.A: SEPA-N	Local No: 108 Sens.: 9.1													
F.A.R: R	Level: 17m UE: <.01 FAI: 0.880													
Comment: 40m wide river section with flows outflanking cableway on rb at extreme stages. Adequately gauged to bankfull. Loch Badanloch and An-Ruathair used for river regulation (to benefit fisheries) utilising 30% of catchment, reduced to 24% in Nov 1986 following removal of control structure on Loch An-Ruathair. Data available on storage changes in both lochs. # Typical Scottish upland mix of hill pasture and moorland with some 20 sq.km of surface storage distributed over several medium size lochs.		1996	980	89	616	84	10.75	176.1	10/02	1.76	27/09	24.3	5.29	2.60
		1997	1109	101	614	84	10.74	104.2	27/11	2.11	03/10	23.2	6.40	2.85
		1998	1374	125	958	131	16.76	164.2	20/10	2.69	07/10	37.4	11.03	3.51
		1999	1325	120	901	123	15.75	197.2	06/12	3.20	05/09	36.3	9.82	3.43
		2000	1310	119	928	127	16.18	202.4	10/10	3.00	07/08	35.2	9.83	3.30
002002	**Brora at Bruachrobie** C.A: 434.4 km²	93..95	*1299*		**980**		**13.50**	**174.6**	**29/09 1994**	**0.36**	**18/08 1995**	**35.7**	**6.44**	**0.58**
M.A: SEPA-N	**Local No: Sens.:**													
F.A.R:	**Level: m UE: FAI:**													
Comment: Velocity-area station with relatively stable cobble control at the end of the measuring reach. Natural regime apart from a small headwater diversion into the Shin catchment.		1996	1057	81	662	68	9.09	123.9	02/12	0.53	17/08	23.8	4.40	0.65
		1997	1219	94	715	73	9.85	85.3	01/03	0.84	25/08	26.2	4.31	1.14
		1998	1485	114	1103	113	15.20	125.3	13/03	0.87	05/06	40.1	8.98	1.43
		1999	1458	112	1087	111	14.97	205.5	06/12	0.84	12/08	35.9	8.72	1.18
		2000	1386	107	1022	104	14.04	176.7	07/03	0.68	26/07	32.8	7.45	1.01
003003	**Oykel at Easter Turnaig** C.A: 330.7 km²	**77..95**	**2022**		**1594**		**16.72**	**847.5**	**06/10 1978**	**0.35**	**21/08 1995**	**40.4**	**8.34**	**1.02**
M.A: SEPA-N	Local No: 113 Sens.: 12.0													
F.A.R: N	Level: 16m UE: <.01 FAI: 0.919													
Comment: 40m wide river section. Flows fully contained except in extreme circumstances (e.g. Oct 1978). Rock armouring of the bed immediately d/s (Feb 1986) has rendered the low flow rating more stable. 100% natural flow regime with little loch storage. # Catchment is typical Highland mix of rough grazing and moorland with some afforestation in middle reaches.		1996	1523	75	1088	68	11.38	309.0	15/02	0.80	24/06	27.8	5.02	1.00
		1997	1813	90	1260	79	13.21	359.7	04/04	0.72	10/06	31.7	6.15	1.39
		1998	2329	115	1811	114	18.99	290.8	12/02	0.96	08/10	43.6	11.63	1.48
		1999	2356	117	1721	108	18.05	657.7	05/12	0.87	11/08	44.0	9.69	1.16
		2000	2077	103	1620	102	16.95	340.4	29/10	0.80	16/05	41.8	8.59	1.11
003004	**Cassley at Rosehall** C.A: 187.5 km²	**79..95**	**2213**		**1223**		**7.27**	**261.3**	**29/09 1994**	**0.17**	**13/06 1992**	**17.1**	**3.11**	**0.72**
M.A: SEPA-N	Local No: 116 Sens.: 12.8													
F.A.R: H	Level: 3m UE: FAI:													
Comment: Cableway at 35m wide river section located 400m d/s of stage measuring site. Stable gabion groyne control adequately gauged to bankfull. Runoff (apart from compensation flows and spillage) from 14% of upper catchment diverted to Shin hydro scheme. No significant surface storage. # Typical Highland mix of rough grazing and moorland with some afforestation.		1996	1766	80	849	69	5.03	113.6	15/02	0.44	24/06	11.6	2.29	0.56
		1997	2096	95	1057	86	6.29	174.9	04/04	0.29	10/06	14.7	2.63	0.74
		1998	2543	115	1358	111	8.08	150.0	15/09	0.68	22/05	20.4	4.27	0.93
		1999	2698	122	1384	113	8.23	**314.2**	**05/12**	0.36	11/08	18.3	3.97	0.69
		2000	2457	111	1308	107	7.75	160.8	29/10	0.69	27/07	19.8	3.44	0.92
003002	**Carron at Sgodachail** C.A: 241.1 km²	**74-95**	**1964**		**1189**		**9.09**	**340.3**	**20/09 1981**	**0.35**	**22/08 1995**	**20.8**	**4.61**	**0.91**
M.A: SEPA-N	Local No: 107 Sens.: 13.4													
F.A.R: H	Level: 71m UE: <.01 FAI: 0.978													
Comment: River section, well gauged to bankfull. Gravel bed with problems of stability in low flow control necessitating revised rating from time to time. Computed low flows are natural in relation to about 80% of catchment; remainder of headwaters are diverted at low and medium flows to Conon Valley hydro scheme. # Much of this remote Highland catchment is above 600m with a few hilltop tarns but no significant storage.		1996	1405	72	789	66	6.02	152.6	15/02	0.73	19/08	12.4	3.34	0.91
		1997	1665	85	903	76	6.90	165.3	01/07	0.96	10/06	15.6	3.32	1.22
		1998	2246	114	1404	118	10.73	147.4	16/10	1.24	08/10	25.4	5.86	1.65
		1999	2197	112	1402	118	10.72	203.1	29/11	0.64	11/08	25.0	5.99	0.87
		2000	1979	101	1458	122	11.12	215.5	06/03	0.91	24/07	27.5	5.45	1.29
004003	**Alness at Alness** C.A: 201.0 km²	**74-95**	**1445**		**956**		**6.09**	**248.8**	**06/10 1993**	**0.32**	**05/09 1976**	**13.2**	**3.82**	**0.77**
M.A: SEPA-N	Local No: 106 Sens.: 10.1													
F.A.R: SR	Level: 12m UE: <.01 FAI: 0.908													
Comment: 20m wide fully contained river section with stable boulder control. Difficulties in c/m low flows. Adequately gauged to MAF but upgrading of high flow rating anticipated. Barrage on Loch Morie, through which 45% of catchment drains, was constructed in 1979 for river regulation (to benefit fisheries). # Most of the catchment is typically Highland and rough grazing.		1996	1056	73	680	71	4.32	52.1	06/11	0.38	24/09	9.1	2.56	0.91
		1997	1312	91	806	84	5.14	109.1	01/07	0.91	03/11	11.7	2.73	1.19
		1998	1776	123	1304	136	8.31	102.7	16/10	0.97	10/07	17.9	5.05	1.43
		1999	1678	116	1179	123	7.51	85.6	30/11	0.94	04/09	17.5	5.09	1.25
		2000	1607	111	1288	135	8.18	78.7	07/01	1.16	27/07	18.3	4.82	1.45
004006	**Bran at Dosmucheran** C.A: 116.1 km²	**89..95**	**2436**		**2033**		**7.48**	**117.6**	**01/01 1992**	**0.14**	**18/08 1995**	**18.5**	**3.82**	**0.43**
M.A: SEPA-N	Local No: Sens.:													
F.A.R: N	Level: 119m UE: FAI:													
Comment: Velocity-area station with gravel control. Cableway capacity considerably exceeds bankfull. Substantial storage in Loch Croisg (commands 45% of catchment); lochans also common between 300-400 m, but flow regime is responsive and natural. # Very wet, rugged, Highland catchment developed mainly on Moinian metamorphics. Moorland and rough grazing predominate, little afforestation; Achnasheen is the only significant settlement.		1996	1518	62	1256	62	4.61	76.8	03/11	0.32	23/09	10.9	2.28	0.64
		1997	1983	81	1572	77	5.79	86.0	01/03	0.41	10/06	13.9	2.72	0.55
		1998	2608	107	2144	105	7.89	77.6	12/02	0.44	07/10	18.0	4.89	0.95
		1999	2936	121	2286	112	8.42	111.4	05/12	0.29	11/08	20.1	5.41	0.69
		2000	2435	100	1873	92	6.88	86.4	01/01	0.35	27/07	18.9	3.22	0.45

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
004005	**Meig at Glenmeannie** C.A: 120.5 km^2	**86-95**	**2389**		**1873**		**7.16**	**222.2**	**16/01 1993**	**0.16**	**11/08 1995**	**17.2**	**3.55**	**0.52**
M.A: SEPA-N	Local No: 124 Sens.: B/full: 150.0m^3s^{-1}													
F.A.R: N	Level: 121m UE: FAI:													
Comment: 25m wide river section which overtops the lb during extreme floods (rb is eroding). Adequately gauged to bankfull. Levels may drop below tapping pipe in extreme droughts. No artificial influences thereby providing a useful indication of natural runoff. Only significant surface storage in Loch Beannacharain through which 70% of catchment drains. # Typical Scottish upland catchment.		1996	1513	63	1120	60	4.27	71.2	02/11	0.31	24/09	10.6	2.03	0.51
		1997	2064	86	1483	79	5.67	111.4	01/03	0.47	22/07	13.1	2.46	0.59
		1998	2679	112	2091	112	7.99	73.3	11/02	0.54	07/10	19.5	4.73	0.82
		1999	2756	115	2103	112	8.04	127.9	05/12	0.33	11/08	19.8	4.19	0.58
		2000	2338	98	1912	102	7.28	97.4	01/01	0.47	26/07	18.7	3.82	0.68
004004	**Blackwater at Contin** C.A: 336.7 km^2	**81-95**	**1713**		**584**		**6.24**	**192.8**	**06/02 1989**	**0.75**	**13/12 1989**	**13.7**	**3.28**	**1.42**
M.A: SEPA-N	Local No: 120 Sens.: 11.3													
F.A.R: H	Level: 20m UE: FAI:													
Comment: 50m wide river section with unstable gravel control requiring regular recalibration at low flows. Runoff from 50% of natural catchment, along with interbasin transfers from rivers Broom and Carron amounting to 20% of natural catchment, bypass station for power generation and discharge to Loch Luichart. Storages in Loch Vaich and Loch Glascarnoch controlled for power generation. # Typical Highland mix of rough grazing and moorland with some afforestation in middle reaches.		1996	1175	69	368	63	3.92	37.7	02/12	1.52	25/01	7.3	2.44	1.67
		1997	1494	87	435	74	4.64	61.9	01/03	1.25	10/01	8.7	2.82	1.59
		1998	1961	114	598	102	6.39	76.6	16/10	1.15	28/09	13.8	3.99	1.62
		1999	1984	116	600	103	6.40	89.5	06/12	1.28	28/08	13.5	3.81	1.51
		2000	1836	107	720	123	7.67	100.4	06/03	1.42	02/10	18.9	3.50	1.72
004001	**Conon at Moy Bridge** C.A: 961.8 km^2	**47..95**	***1854***		**1584**		**48.30**	**1076.0**	**17/12 1966**	**0.57**	**24/09 1956**	**93.1**	**40.04**	**9.61**
M.A: SEPA-N	Local No: 110 Sens.: 5.1													
F.A.R: H	Level: 10m UE: <.01 FAI: 0.764													
Comment: 80m wide river section. Bypassing, via right floodbank, during extreme flows. Station resited 20m u/s in Jan 1976, early flows less reliable. Gauged to bankfull. Catchment enhanced by 20% by transfers from the Orrin, Ewe, Broom and Carron catchments for power generation. Extensive volumes of surface storage controlled for power generation (but no further development after 1960). Hydrograph dominated by influence of Torr Achilty power station. # Typical Highland catchment.		1996	1270	69	1102	70	33.52	228.4	06/11	12.30	11/05	73.1	18.63	13.32
		1997	1648	89	1419	90	43.29	351.5	01/03	12.97	03/08	91.5	32.35	14.02
		1998	2139	115	2087	132	63.64	190.8	11/02	11.37	04/06	110.5	54.29	13.48
		1999	2245	121	2130	134	64.96	411.1	06/12	11.21	25/06	115.3	55.45	15.98
		2000	1966	106	1996	126	60.70	322.4	07/03	11.64	10/05	131.2	51.49	12.70
005003	**Glass at Kerrow Wood** C.A: 481.8 km^2	**88..95**	**2594**		**2269**		**34.66**	**320.8**	**05/02 1990**	**6.29**	**20/06 1989**	**67.0**	**27.28**	**9.23**
M.A: SEPA-N	Local No: Sens.:													
F.A.R: H	Level: 53m UE: FAI:													
Comment: Velocity-area station, 50m wide, with gravel control. Flows >200 m^3s^{-1} inundate extensive floodplain on lb. Very complex flow regime: substantial loch storage exploited for HEP generation (station d/s of Fasnaklye Power Station), compensation flows from Loch Mullardoch and transfers via two tunnels. But no net import or export of water. # Rugged, Highland catchment developed mostly on Monian Series metamorphics. Predominately moorland and rough grazing but substantial afforestation below 400m.		1996	1608	62	1213	53	18.49	157.7	06/11	**6.07**	**21/07**	37.4	13.52	6.61
		1997	2104	81	1731	76	26.45	302.6	01/03	6.88	28/06	45.1	20.35	10.35
		1998	2576	99	2238	99	34.19	163.7	11/02	7.09	14/09	59.7	31.78	10.96
		1999	2698	104	2525	111	38.58	226.4	29/11	**5.63**	**26/06**	66.2	36.26	7.57
		2000	2324	90	2342	103	35.68	194.6	05/01	7.34	20/07	71.3	28.18	9.27
005002	**Farrar at Struy** C.A: 311.3 km^2	**86..95**	**2393**		**2087**		**20.60**	**216.1**	**05/03 1990**	**4.44**	**04/07 1995**	**42.7**	**14.74**	**6.25**
M.A: SEPA-N	Local No: 127 Sens.:													
F.A.R:	Level: 51m UE: FAI:													
Comment: Velocity-area station. Flows well contained at all stages. Low flows reflect compensation releases from Loch Beannacharain and flow regime is heavily influenced by operation of HEP station <1.5km u/s. Substantial HEP storage in Loch Monar but no import/export of water to/from the catchment. # Typical Scottish upland catchment with some afforestation in lower reaches.		1996	1571	66	1136	54	11.18	83.5	06/11	5.38	24/01	22.9	7.21	5.65
		1997	2087	87	1466	70	14.47	159.3	01/03	5.89	21/04	27.4	9.67	6.13
		1998	2565	107	2280	109	22.51	111.2	11/02	6.06	07/07	48.4	16.85	6.88
		1999	2627	110	2243	107	22.14	191.1	05/12	5.96	02/08	42.8	17.66	6.10
		2000	2296	96	2255	108	22.20	70.6d	07/01	5.82	28/06	49.1	15.54	6.21
006008	**Enrick at Mill of Tore** C.A: 105.9 km^2	**79..95**	**1468**		**985**		**3.31**	**83.6**	**16/01 1993**	**>0.00**	**23/08 1995**	**8.5**	**1.52**	**0.06**
M.A: SEPA-N	Local No: 117 Sens.:													
F.A.R: N	Level: 109m UE: <.01 FAI: 0.852													
Comment: 15m wide river section. Prior to 1991, bypassing on rb at extreme flows. Well established, stable rating up to bankfull. Computed flows 100% natural but whole catchment drains through Loch Meiklie (1 sq.km). Flows recede to unexpected low levels possibly due to sub-surface flows below station. # Typical upland catchment (rough grazing and moorland) with increasing afforestation (approx. 25% of catchment) especially around Loch Meiklie.		1996	897	61	533	54	1.78	30.1	06/11	0.03	06/08	4.6	0.79	0.04
		1997	1293	88	885	90	2.97	**105.3**	**01/03**	0.11	09/08	6.3	1.24	0.20
		1998	1551	106	1134	115	3.81	53.6	17/10	0.15	08/10	9.8	2.05	0.24
		1999	1704	116	1310	133	4.40	69.4	23/12	0.05	09/08	11.9	1.82	0.09
		2000	1448	99	1150	117	3.85	63.5	05/01	0.09	24/07	10.8	1.68	0.20
006007	**Ness at Ness-side** C.A: 1839.1 km^2	**73-95**	**1924**		**1542**		**89.91**	**801.2**	**07/02 1989**	**7.86**	**03/07 1977**	**182.7**	**66.74**	**19.55**
M.A: SEPA-N	Local No: 105 Sens.: 6.3													
F.A.R: H	Level: 7m UE: <.01 FAI: 0.871													
Comment: 80m wide fully contained river section. Frequent recalibration of low flow rating due to alteration of stop-log configuration on weir which forms control. Fully calibrated to maximum recorded flow. HEP schemes on Garry, Moriston and Foyers tributaries utilise runoff from 56% of catchment. Caledonian Canal lockages bypass station but, overall, small net impact. Hydrograph damped by influence of Loch Ness. # Large SW/NE trending Highland catchment.		1996	1278	66	919	60	53.47	347.7	06/11	9.41	22/09	110.3	33.35	14.93
		1997	1740	90	1347	87	78.56	548.2	02/03	19.63	05/10	149.3	51.07	26.15
		1998	2088	109	1602	104	93.44	359.5	12/02	18.98	07/10	189.1	77.90	20.35
		1999	2306	120	1917	124	111.81	471.0	30/11	19.89	06/05	238.5	76.58	24.93
		2000	2035	106	1769	114	102.87	483.2	07/01	9.66	04/07	237.8	77.02	18.48
007004	**Nairn at Firhall** C.A: 313.0 km^2	**79-95**	**1022**		**574**		**5.70**	**270.4**	**06/10 1993**	**0.47**	**21/08 1995**	**12.6**	**3.36**	**0.82**
M.A: SEPA-N	Local No: 114 Sens.: 9.3													
F.A.R: PN	Level: 7m UE: FAI:													
Comment: 20m wide river section with overbank flow at extreme levels. Adequately gauged to bankfull and a rock protection to a d/s pipeline provides a stable low flow control. Sensibly natural regime; only net abstraction is PWS for Inverness from Loch Duntelchaig through which only 7% of upper catchment drains. No other significant surface storage. Daily level observations from Apr 1974 to Jan 1976. # Catchment comprises hill pastures and peat moorland except for 20% of d/s reach which is cultivated.		1996	727	71	317	55	3.13	44.8	06/11	0.62	19/08	6.5	1.82	0.68
		1997	940	92	495	86	4.91	**328.3**	**01/07**	0.90	03/10	9.7	2.47	0.98
		1998	1139	111	614	107	6.10	83.9	14/11	1.20	08/10	12.3	4.16	1.46
		1999	1153	113	641	112	6.36	103.9	06/06	0.86	05/09	12.9	4.15	1.06
		2000	1144	112	676	118	6.69	168.2	26/04	0.88	22/07	14.1	3.85	1.13
007001	**Findhorn at Shenachie** C.A: 415.6 km^2	**60..95**	**1263**		**1040**		**13.70**	**577.7**	**21/09 1981**	**1.08**	**27/08 1984**	**31.1**	**7.95**	**2.03**
M.A: SEPA-N	Local No: 102 Sens.: 15.3													
F.A.R: N	Level: 252m UE: <.01 FAI: 0.992													
Comment: 50m wide river section adequately gauged to bankfull. Flow contained under cableway up to 3.9m. Liable to extremely rapid rises in level. Prior to Jan 1978, station located 700m u/s and cableway 500m d/s of present site. 100% natural runoff with minimal surface storage. # Extensive blanket peat over long, narrow, steep-sided catchment which is nested within that of station 7002.		1996	895	71	766	74	10.06	258.7	06/11	1.37	20/07	22.7	5.93	1.55
		1997	1099	87	931	90	12.28	274.4	17/02	2.16	12/08	26.8	6.22	2.36
		1998	1412	112	1226	118	16.15	202.8	16/10	2.54	05/10	36.6	10.49	3.05
		1999	1443	114	1236	119	16.29	326.6	30/11	1.80	05/09	38.8	9.70	2.09
		2000	1460	116	1386	133	18.22	317.8	08/11	1.50	23/07	44.3	10.01	2.10
007005	**Divie at Dunphail** C.A: 165.0 km^2	**77..95**	**893**		**532**		**2.78**	**118.7**	**24/09 1984**	**0.32**	**21/08 1995**	**5.9**	**1.59**	**0.49**
M.A: SEPA-N	Local No: 122 Sens.: 13.3													
F.A.R: N	Level: 117m UE: FAI:													
Comment: 15m wide fully contained river section. Unstable gravel control requires recalibration of low flows following flood events. Calibrated to 60 m^3s^{-1}. Computed flows 100% natural. 20% of catchment drains through Lochindorb (surface area: 2.3 sq.km) the only significant storage. # Catchment is mainly peat moorland.		1996	683	76	390	73	2.03	51.5	04/12	0.40	20/07	4.3	1.12	0.48
		1997	866	97	455	86	2.38	**138.8**	**01/07**	0.54	09/10	4.9	1.25	0.57
		1998	1009	113	645	121	3.37	45.5	16/10	0.72	24/05	6.7	2.26	0.86
		1999	949	106	591	111	3.09	59.0	28/11	0.56	11/08	6.1	1.93	0.63
		2000	1048	117	698	131	3.64	113.5	08/11	0.59	22/07	7.2	2.05	0.70
007002	**Findhorn at Forres** C.A: 781.9 km^2	**58..95**	**1099**		**766**		**19.00**		**17/08 1970**	**1.75**	**23/08 1976**	**41.8**	**11.53**	**3.23**
M.A: SEPA-N	Local No: 101 Sens.: 5.7													
F.A.R: N	Level: 7m UE: <.01 FAI: 0.981													
Comment: 50m wide river section in mobile gravel reach which necessitates frequent recalibration of low flow rating. Flows contained under cableway up to 3.8m. Adequately gauged to bankfull. High flow gauging is difficult – high velocities and substantial rating extrapolation needed for rare floods, sig. overestimation likely; magnitude of the August 1970 flood is under review. 100% natural catchment with minimal surface storage. # Other than a narrow agricultural coastal plain the catchment drains the Monadhliath Mountains; extensive blanket peat cover.		1996	794	72	550	72	13.59	304.2	09/08	2.45	18/08	30.0	7.64	2.70
		1997	1003	91	729	95	18.07	514.4	01/07	3.47	03/10	38.6	9.38	3.85
		1998	1240	113	961	125	23.83	314.7	17/10	4.47	08/10	51.1	16.07	5.34
		1999	1232	112	929	121	23.03	418.3	30/11	3.18	05/09	52.2	14.48	3.55
		2000	1274	116	1054	138	26.07	750.3	08/11	2.79	23/07	57.5	14.21	3.74

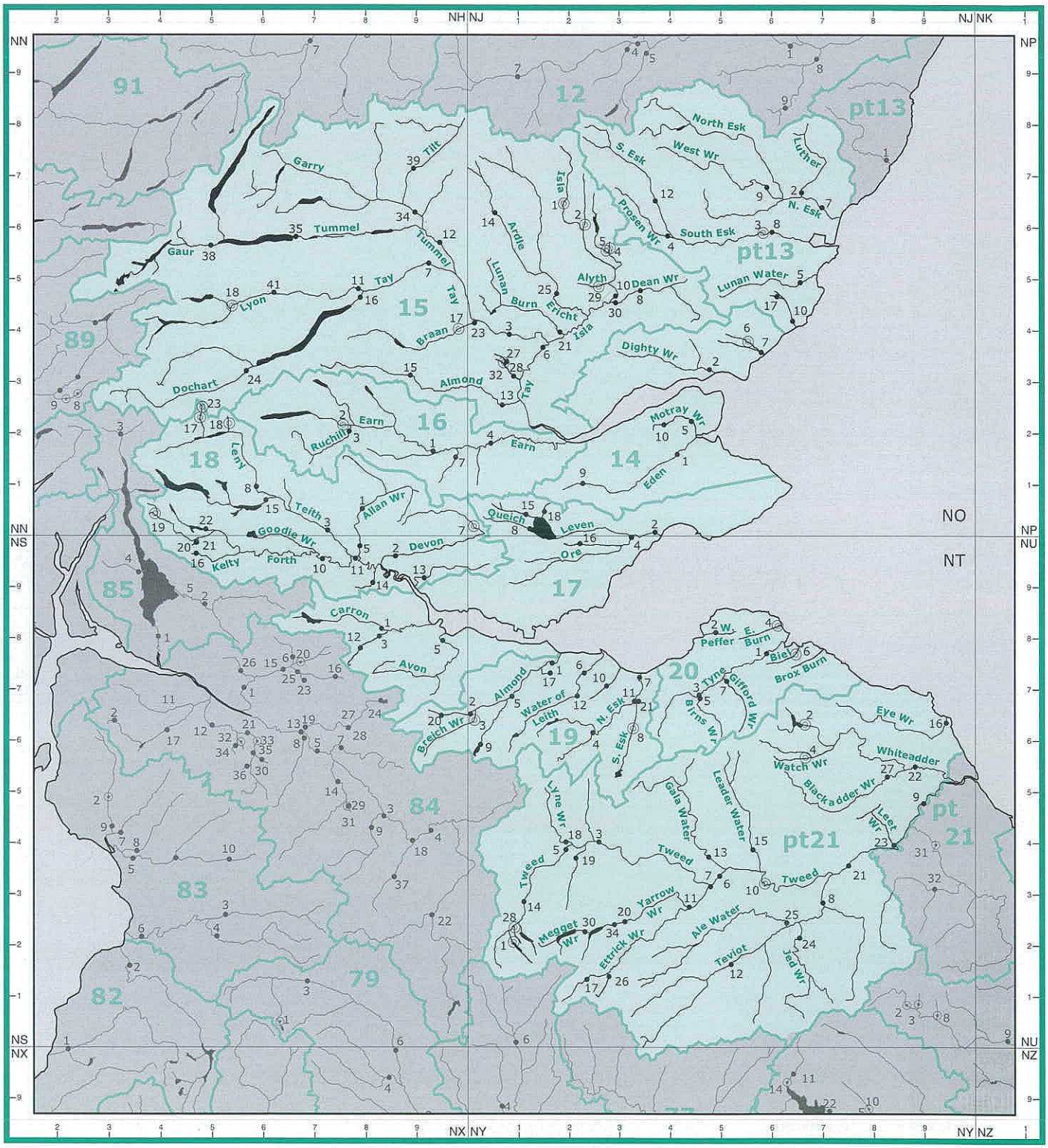
		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
007006	**Lossie at Torwinny** C.A: 20.0 km^2	**87..95**	**892**		**580**		**0.37**	**26.4**	**28/10 1990**	**0.07**	**21/08 1995**	**0.7**	**0.20**	**0.10**
M.A: SEPA-N	Local No: Sens.: 15.2													
F.A.R: N	Level: 199m UE: FAI:													
Comment: Velocity-area station with gabion control (sloping). Curved approach but good low flow calibration. Natural regime, no abstractions. # Small, heavily forested (1989: about 75%) upland catchment, some rough moorland remains in headwaters; developed on metamorphics with some superficial cover.		1996	809	91	399	69	0.25	6.9	04/12	0.08	21/07	0.5	0.16	0.09
		1997	928	104	503	87	0.32	31.7	**01/07**	0.11	27/04	0.5	0.16	0.12
		1998	1109	124	658	113	0.42	8.6	13/07	0.12	02/04	0.7	0.26	0.13
		1999	1025	115	593	102	0.38	8.1	06/06	0.11	03/08	0.7	0.24	0.12
		2000	1189	133	731	126	0.46	15.0	08/11	0.11	22/07	0.8	0.25	0.13
007003	**Lossie at Sheriffmills** C.A: 216.0 km^2	**63..95**	**822**		**376**		**2.58**	**89.8**	**17/08 1970**	**0.36**	**26/08 1976**	**4.9**	**1.60**	**0.69**
M.A: SEPA-N	Local No: Sens.: 10.6 B/full: 35.7m^3s^{-1}													
F.A.R: P	Level: 18m UE: <.01 FAI: 0.989													
Comment: Cableway rated. The main control is a long and insensitive stone weir 350m d/s. Site moved 150m u/s in Sep 1978. Levels recorded from 20/06/58, flows from 01/10/63. Flood warning station. Glenlatterach Res. provides supply for Elgin. Abstraction has moderate impact on flows (approx. 20% of the 95% exceedance flow). # Schists, gneisses and valley gravels with some ORS. Moorland, substantial afforestation in headwaters and arable in valley bottoms.		1996	684	83	277	74	1.89	46.1	04/12	0.62	19/08	3.5	1.31	0.68
		1997	859	105	393	105	2.69	**102.4**	**02/07**	0.89	09/10	4.4	1.63	0.95
		1998	983	120	507	135	3.47	36.9	14/11	1.16	09/07	6.1	2.41	1.29
		1999	887	108	428	114	2.93	51.2	06/06	0.78	05/09	5.4	1.92	0.89
		2000	1020	124	571	152	3.90	78.4	26/04	1.02	22/07	7.1	2.33	1.15
008013	**Feshie at Feshie Bridge** C.A: 231.0 km^2	**92..95**	**1391**		**1165**		**8.54**	**173.6**	**16/01 1993**	**0.88**	**21/08 1995**	**17.5**	**5.53**	**1.42**
M.A: SEPA-N	Local No: Sens.: 8.9													
F.A.R: N	Level: 232m UE: FAI:													
Comment: Velocity-area station with a boulder control, reasonably stable but liable to considerable movement in extreme spates. All flows contained. Cableway rated. Natural flow regime. Old station operated between 1951-1975 (no flow data published) 0.5km u/s. # Geology: Moinian metamorphics of Grampian Mountains overlain with glacial material and granite of Cairngorms. Mountainous moorland catchment, pastoral with some forestry in lower reaches.		1996	1090	78	792	68	5.79	110.3	08/01	1.30	06/08	12.5	3.69	1.45
		1997	1298	93	996	85	7.29	195.6	17/02	1.80	03/01	15.2	3.67	1.94
		1998	1499	108	1137	98	8.33	109.7	30/12	2.21	08/10	15.7	6.07	3.04
		1999	1511	109	1164	100	8.53	222.5	23/12	1.59	04/09	17.1	5.40	1.88
		2000	1450	104										
008002	**Spey at Kinrara** C.A: 1011.7 km^2	**51..95**	**1332**		**688**		**22.08**	**317.0**	**18/12 1966**	**2.42?**	**22/08 1984**	**43.5**	**15.59**	**5.82**
M.A: SEPA-N	Local No: Sens.: 7.3 B/full: 161.2m^3s^{-1}													
F.A.R: H	Level: 210m UE: <.01 FAI: 0.938													
Comment: Cableway rated to bankfull, natural control; frequent rating changes. Station is 5km d/s of confluence with R. Feshie. Well inlet pipes fractured in early 1980s (giving some data problems), re-laid Mar 1987. 380 sq km developed for hydro-power with diversions and storage; substantial net export. # Moinian metamorphic and granites. High mountain and moorland, some forestry and valley grazing.		1996	1025	77	529	77	16.92	109.7	06/11	3.86	24/09	36.7	11.44	4.47
		1997	1289	97	708	103	22.70	217.5	02/03	4.76	26/08	45.8	13.20	5.79
		1998	1537	115	837	122	26.85	125.2	30/12	7.19	08/10	53.1	21.09	8.66
		1999	1620	122	916	133	29.39	213.6	30/11	5.89	05/09	59.8	19.58	6.21
		2000	1500	113	923	134	29.53	201.3	07/03	5.12	25/07	67.9	17.12	6.45
008005	**Spey at Boat of Garten** C.A: 1267.8 km^2	**51..95**	**1276**		**722**		**29.02**	**373.6**	**18/12 1966**	**4.08**	**06/09 1976**	**54.7**	**21.80**	**8.65**
M.A: SEPA-N	Local No: Sens.: 6.0 B/full: 402.0m^3s^{-1}													
F.A.R: H	Level: 197m UE: <.01 FAI: 0.929													
Comment: Cableway rated with natural control, relatively frequent rating changes. 380 sq.km developed for hydro-power with diversions and storage; substantial net export. # Granites and Moinian metamorphics. High mountain, moorland, some forestry, pastoral and some arable farming.		1996	1012	79	533	74	21.38	126.1	06/11	5.40	24/09	44.1	15.67	6.28
		1997	1256	98	671	93	26.98	257.3	02/03	7.50	12/08	50.1	16.16	8.24
		1998	1500	118	805	111	32.38	127.1	14/11	8.39	25/05	64.8	25.39	11.58
		1999	1564	123	885	123	35.57	229.5	01/12	7.94	11/08	70.6	24.78	9.20
		2000	1460	114	966	134	38.74	210.2	08/03	7.35	06/07	89.5	24.92	9.36
008009	**Dulnain at Balnaan Bridge** C.A: 272.2 km^2	**52..95**	**1008**		**686**		**5.92**	**230.0**	**17/08 1970**	**0.60**	**21/08 1995**	**12.8**	**3.69**	**1.09**
M.A: SEPA-N	Local No: Sens.: 8.8 B/full: 100.0m^3s^{-1}													
F.A.R: N	Level: 224m UE: <.01 FAI: 0.997													
Comment: Cableway rated with natural control, subject to relatively frequent change but generally good low flow calibration. Natural regime, not affected by diversions or storages. # Granites and Moinian metamorphic. Highland, moorland and pastoral.		1996	756	75	453	66	3.90	81.5	06/11	0.65	19/08	8.4	2.34	0.77
		1997	919	91	599	87	5.17	128.1	01/03	1.06	04/10	10.5	2.67	1.19
		1998	1164	115	813	119	7.01	92.0	17/10	1.55	10/07	14.9	4.62	1.75
		1999	1197	119	879	128	7.59	135.9	30/11	1.15	05/09	17.0	4.63	1.26
		2000	1199	119	933	136	8.03	149.2	08/11	1.00	23/07	17.8	4.39	1.21
008010	**Spey at Grantown** C.A: 1748.8 km^2	**53..95**	**1183**		**675**		**37.44**	**527.6**	**06/02 1990**	**6.01**	**07/09 1976**	**71.9**	**28.31**	**10.59**
M.A: SEPA-N	Local No: Sens.: 5.9 B/full: 520.0m^3s^{-1}													
F.A.R: H	Level: 193m UE: <.01 FAI: 0.947													
Comment: Cableway rated with natural control. Improved data quality following move of recorder and cableway to a united site (NJ033268) in mid-1987. 22% of catchment developed for hydro-power with diversions and storage; significant net export. # Granites and Moinian metamorphic. Mountain, high moorland, forestry, pastoral and arable in valley bottoms.		1996	944	80	478	71	26.45	182.1	06/11	7.05	24/09	53.6	19.40	7.84
		1997	1157	98	603	89	33.45	302.1	02/03	9.43	26/08	64.5	20.58	10.24
		1998	1396	118	747	111	41.42	186.2	17/10	12.66	08/10	82.0	33.43	14.89
		1999	1448	122	830	123	46.04	297.7	30/11	10.40	05/09	89.2	33.83	11.64
		2000	1379	117	883	131	48.84	319.9	08/11	10.73	07/07	105.1	33.02	12.89
008011	**Livet at Minmore** C.A: 104.0 km^2	**78..95**	**999**		**649**		**2.14**	**60.2**	**13/10 1982**	**0.53**	**14/12 1989**	**3.9**	**1.62**	**0.74**
M.A: SEPA-N	Local No: Sens.: 9.5 B/full: 45.0m^3s^{-1}													
F.A.R: N	Level: 215m UE: <.01 FAI: 1.000													
Comment: Velocity-area station with boulder/rubble control (remnant of an old weir); good low flow calibration. Tapping pipe shortened in 1986 to avoid velocity drawdown. Natural regime, no significant abstractions. # Upland catchment: Moorland with some afforestation developed on complex basement geology - metamorphics and igneous; some superficial cover.		1996	874	87	607	94	2.00	26.4	04/12	0.67	18/08	3.6	1.62	0.72
		1997	952	95	586	90	1.93	42.7	01/07	0.78	05/10	3.5	1.43	0.81
		1998	1165	117	847	131	2.79	29.5	04/04	1.02	06/03	4.9	2.05	1.30
		1999	1063	106	668	103	2.20	25.1	20/09	0.75	05/09	3.9	1.75	0.86
		2000	1252	125	891	137	2.93	43.2	08/11	0.76	06/08	5.1	2.10	0.88
008004	**Avon at Delnashaugh** C.A: 542.8 km^2	**52..95**	**1072**		**840**		**14.45**	**525.0**	**17/08 1970**	**2.13**	**27/08 1976**	**27.1**	**10.42**	**4.02**
M.A: SEPA-N	Local No: Sens.: 4.9 B/full: 364.5m^3s^{-1}													
F.A.R: N	Level: 150m UE: <.01 FAI: 0.990													
Comment: Velocity-area station with cableway, natural control; unstable rating. Lowest levels not recorded 1981-84 (fell below inlet pipe). Rating liable to change after major floods. Improved hydrometric performance following station reconstruction (1985). Catchment rainfall is probably underestimated. # Gneisses and metamorphosed l'st with some igneous, some s'st. Mountain catchment draining N side of highest Cairngorm peaks with moorland and rough grazing; a little arable farming in valley bottom.		1996	967	90	718	85	12.32	142.7	08/01	2.95	18/08	22.9	9.56	3.50
		1997	1048	98	772	92	13.29	300.6	01/07	4.26	05/10	23.8	9.38	4.62
		1998	1236	115	1032	123	17.76	185.3	14/11	7.51	24/05	31.2	13.32	8.45
		1999	1163	108	853	102	14.68	211.5	28/11	3.84	05/09	28.0	10.66	4.52
		2000	1343	125	1120	133	19.22	231.5	26/04	4.46	06/08	38.4	13.17	5.30
008015	**Fiddich at Auchindoun** C.A: 44.5 km^2	**91..95**	**1009**		**627**		**0.88**	**30.1**	**09/09 1995**	**0.23**	**20/07 1992**	**1.7**	**0.66**	**0.26**
M.A: SEPA-N	Local No: Sens.: 10.6													
F.A.R: N	Level: 180m UE: FAI:													
Comment: Velocity-area station on deep, wide pool. Rock bar provides control but is interfered with by children building gravel dams. A new d/s bridge provides high flow gauging opportunities, otherwise by wading. Well is erected in channel behind a tree and rests on bedrock. Former post gauge 700m d/s records from Feb 1974 - Jun 1990. # The Fiddich rises in hills to NE of Cairngorm plateau and drains an area of mixed metamorphic geology. Mixed farming and forestry.		1996	929	92	583	93	0.82	15.8	04/12	0.27	18/08	1.4	0.60	0.29
		1997	987	98				33.4	01/07	0.29	08/10			
		1998	1283	127	882	141	1.25	22.9	04/04	0.47	25/02	2.2	0.89	0.55
		1999	1136	113	668	107	0.94	16.0	26/11	0.31	05/09	1.9	0.69	0.34
		2000	1302	129						0.34	06/08			
008006	**Spey at Boat o Brig** C.A: 2861.2 km^2	**52..95**	**1116**		**712**		**64.58**	**1675.0**	**17/08 1970**	**9.31**	**16/08 1955**	**121.1**	**50.01**	**18.94**
M.A: SEPA-N	Local No: Sens.: 3.9 B/full: 730.8m^3s^{-1}													
F.A.R: H	Level: 43m UE: <.01 FAI: 0.965													
Comment: Lowest station currently operating on the Spey. Cableway rated 65m wide section with natural control, extreme floods bypass station on lb. 380 sq.km developed for hydro-power with diversions and storage; limited net impact on annual runoff (small loss). # Mainly granites and Moinian metamorphics. Geology: Dalradian with a little Old Red Sandstone. Land use: mountain (includes all northern slopes of Cairngorms), moorland, hill grazing, arable and forestry.		1996	908	81	562	79	50.83	325.8	04/12	13.84	26/09	98.4	39.21	15.73
		1997	1072	96	635	89	57.61	704.9	01/07	16.22	05/10	108.8	38.32	18.76
		1998	1298	116	812	114	73.70	363.2	14/11	25.25	25/05	133.3	60.34	30.32
		1999	1296	116	853	120	77.39	474.4	28/11	19.01	05/09	148.5	61.83	21.76
		2000	1321	118	949	133	85.86	680.2	08/11	22.36	26/07	166.2	64.14	26.40

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
009005	**Allt Deveron at Cabrach** C.A: 67.0 km^2	**48..95**	*1054*		**727**		**1.54**	**43.2**	**07/09 1995**	**0.25**	**08/10 1959**	**3.0**	**0.95**	**0.43**
M.A: SEPA-N	Local No: Sens.: 4.4 B/full: 18.0m^3s^{-1}													
F.A.R: N	Level: 288m UE: FAI:													
Comment: Compound broad-crested weir (no divide piers). C/m rating from 1984, earlier record is of inconsistent quality - faulty recorder operation. Overspill onto rb floodplain during high flows. Natural regime. # Rugged topography. Mostly moorland developed on complex basement geology - principally metamorphics.		1996	928	88	662	91	1.40	24.9	15/02	0.36	27/09	2.7	0.91	0.38
		1997	1032	98	610	84	1.30	30.7	01/07	0.39	31/10	2.6	0.77	0.45
		1998	1295	123	945	130	2.01	35.5	04/04	0.66	09/07	3.6	1.26	0.75
		1999	1179	112	724	100	1.54	27.4	20/09	0.39	05/09	3.1	1.01	0.44
		2000	1352	128	1036	143	2.20	35.7	26/04	0.47	06/08	4.3	1.31	0.60
009004	**Bogie at Redcraig** C.A: 179.0 km^2	**80..95**	**959**		**518**		**2.94**	**60.0**	**11/09 1995**	**0.67**	**22/08 1994**	**5.7**	**2.14**	**0.87**
M.A: SEPA-N	Local No: Sens.: 7.2 B/full: 50.0m^3s^{-1}													
F.A.R: N	Level: 120m UE: <.01 FAI: 0.998													
Comment: Velocity-area station with broken rubble weir control; stable. Cableway rated. Good low flow calibration. Gaugeboard read record for d/s site, 1973-81. Natural regime, no abstractions. # Geology: Dalradian metamorphics but large areas of ORS. Some high moorland, pastoral and arable in valleys.		1996	867	90	470	91	2.66	27.0	10/02	0.73	30/09	5.2	1.92	0.78
		1997	939	98	434	84	2.46	32.2	01/07	1.00	31/10	4.4	1.83	1.08
		1998	1144	119	748	144	4.25	59.8	04/04	1.73	09/07	7.0	3.35	2.01
		1999	1089	114	578	112	3.28	34.7	24/12	1.02	05/09	6.0	2.55	1.16
		2000	1258	131	772	149	4.37	79.6	26/04	1.30	06/08	7.8	2.98	1.45
009001	**Deveron at Avochie** C.A: 441.6 km^2	**59..95**	**982**		**612**		**8.57**	**236.5**	**17/08 1970**	**1.29**	**26/08 1976**	**16.3**	**5.97**	**2.22**
M.A: SEPA-N	Local No: Sens.: 9.0 B/full: 350.0m^3s^{-1}													
F.A.R: N	Level: 82m UE: <.01 FAI: 0.998													
Comment: Cableway rated with stable rubble weir, rather insensitive. Inlet pipes, periodically silted in early 1980s, extended in Mar 1985. No artificial influences on flow. # Complex granites and basic intrusives with Dalradian metamorphics. Moorland, pastoral and arable in valley. Huntly is the only substantial settlement.		1996	895	91	525	86	7.33	99.7	04/12	1.93	28/09	14.1	5.29	2.08
		1997	962	98	495	81	6.93	148.3	01/07	2.14	08/10	12.4	4.80	2.31
		1998	1196	122	785	128	11.00	150.3	04/04	4.08	09/07	18.4	8.26	4.74
		1999	1105	113	621	101	8.69	104.9	28/11	2.17	05/09	16.6	6.29	2.56
		2000	1261	128	889	145	12.41	220.4	26/04	2.69	06/08	22.0	8.29	3.31
009003	**Isla at Grange** C.A: 176.1 km^2	**69..95**	**853**		**459**		**2.56**	**94.1**	**28/10 1990**	**0.28**	**26/08 1976**	**5.2**	**1.61**	**0.56**
M.A: SEPA-N	Local No: Sens.: 8.4 B/full: 35.0m^3s^{-1}													
F.A.R: N	Level: 92m UE: <.01 FAI: 0.994													
Comment: Velocity-area station with cableway. Problems with weed growth prior to 1969. Former NERPB operated the station since 1978. Sensibly natural regime. # Compact, upland catchment. Mainly Moinian metamorphic, small amounts of intrusive basic. Some forestry, mainly pastoral and arable.		1996	816	96	421	92	2.35	64.6	04/12	0.49	18/08	4.9	1.39	0.54
		1997	886	104	435	95	2.43	92.1	01/07	0.60	04/10	4.4	1.50	0.69
		1998	1060	124	647	141	3.61	56.6	13/07	0.93	22/06	6.3	2.47	1.14
		1999	978	115	553	120	3.09	79.6	24/12	0.57	05/09	6.0	1.92	0.70
		2000	1128	132	745	162	4.15	78.4	27/05	0.87	06/08	6.6	2.54	1.02
009002	**Deveron at Muiresk** C.A: 954.9 km^2	**60..95**	**916**		**533**		**16.13**	**506.6**	**06/05 1968**	**2.06**	**27/08 1976**	**32.0**	**10.96**	**3.56**
M.A: SEPA-N	Local No: Sens.: 6.6 B/full: 261.9m^3s^{-1}													
F.A.R: N	Level: 25m UE: <.01 FAI: 0.998													
Comment: Cableway rated, natural control, water abstraction point immediately d/s. No visible effect on level records. Floodplain flows have been measured at this site. # Complex granite and older basic intrusives with Dalradian metamorphics. Some ORS. Some high moorland, mainly pastoral and arable.		1996	850	93	490	92	14.79	206.1	04/12	3.10	28/09	31.9	9.66	3.38
		1997	919	100	484	91	14.65	340.5	01/07	2.69	08/10	30.3	9.39	3.14
		1998	1114	122	737	138	22.33	239.8	04/04	5.70	10/07	37.5	17.61	7.82
		1999	1035	113	577	108	17.46	246.1	24/12	3.96	05/09	34.2	12.15	4.44
		2000	1160	127	758	142	22.89	337.4	26/04	4.48	07/08	39.0	16.12	5.32
010002	**Ugie at Inverugie** C.A: 325.0 km^2	**71..95**	**789**		**434**		**4.47**	**107.0**	**12/09 1995**	**0.74**	**26/08 1976**	**8.8**	**3.17**	**1.05**
M.A: SEPA-N	Local No: Sens.: 11.4 B/full: 73.0m^3s^{-1}													
F.A.R: N	Level: 9m UE: <.01 FAI: 0.990													
Comment: Cableway rated. Previously controlled by long and broken weir, unstable and insensitive, severe weedgrowth also, hence complicated history of rating changes, but weir rebuilt in Sep 1996. Very minor export from headwater reservoir but sensibly natural regime. # Granites and older basic intrusives surrounded by Dalradian metamorphics. A little moorland, but mostly lowland in character with arable agriculture and relatively high population density.		1996	723	92	397	91	4.08	68.6	10/02	1.18	19/08	7.4	2.85	1.29
		1997	858	109	425	98	4.38	33.6	02/07	1.62	09/10	9.3	2.83	1.73
		1998	1005	127	687	158	7.08	43.8	17/10	2.37	10/07	12.3	5.74	2.87
		1999	855	108	557	128	5.74	87.2	25/12	1.65	05/09	10.5	4.49	1.83
		2000	1002	127	671	155	6.89	123.9	26/04	1.74	12/08	13.5	4.45	1.99
010003	**Ythan at Ellon** C.A: 523.0 km^2	**83..95**	**800**		**427**		**7.07**	**94.4**	**04/11 1984**	**0.94**	**30/08 1984**	**14.2**	**5.31**	**1.57**
M.A: SEPA-N	Local No: Sens.: 7.1 B/full: 80.0m^3s^{-1}													
F.A.R: N	Level: 4m UE: <.01 FAI: 0.994													
Comment: Velocity-area station with natural control, replacement for 10001 (2.5km u/s, 1965-1983 with chart records back to 1939). Some bypassing on lb during extreme flows. Cableway rated, fairly stable S-D relationship. # Atypical Scottish catchment (very high BFI). Gently undulating, relatively low lying, developed on impermeable metamorphic Lower Dalradian formations overlain with Boulder Clay and morainic drift. Intrusion of ORS in NW. 95% of catchment given over to agriculture (pastoral and arable).		1996	794	99	496	116	8.21	108.4	10/02	1.49	01/10	16.7	5.95	1.81
		1997	851	106	461	108	7.64	52.7	27/11	2.47	08/10	16.1	5.51	2.67
		1998	1021	128	754	177	12.50	58.6	05/04	3.80	09/07	20.6	10.68	4.69
		1999	885	111	579	136	9.60	66.3	25/12	2.94	05/09	17.8	7.75	3.36
		2000	1015	127	709	166	11.72	82.2	26/04	3.40	12/08	23.1	9.06	3.90
011003	**Don at Bridge of Alford** C.A: 499.0 km^2	**73..95**	**978**		**630**		**9.98**	**201.0**	**15/10 1976**	**1.76**	**15/12 1989**	**18.6**	**7.51**	**3.08**
M.A: SEPA-N	Local No: Sens.: 6.0 B/full: 240.0m^3s^{-1}													
F.A.R: N	Level: 133m UE: <.01 FAI: 0.997													
Comment: Most u/s primary station on the Don. Cableway rated. Stable natural control with few changes in rating since flow records began in 1973. Natural regime. # Mainly Dalradian metamorphics, some older basic intrusives and a small pocket of ORS. High moorland, forestry, hill grazing and some arable in the valley bottom.		1996	876	90	610	97	9.62	76.1	15/02	2.75	30/09	17.7	7.61	2.94
		1997	918	94	512	81	8.09	64.9	01/07	3.18	31/10	14.5	6.12	3.34
		1998	1142	117	788	125	12.46	146.3	04/04	5.25	09/07	20.2	9.86	6.21
		1999	1045	107	657	104	10.40	95.0	20/09	3.53	05/09	17.6	8.87	4.08
		2000	1245	127	885	140	13.96	147.7	26/04	3.66	06/08	24.5	10.54	4.30
011002	**Don at Haughton** C.A: 787.0 km^2	**69..95**	**906**		**555**		**13.84**	**322.8**	**13/10 1982**	**2.43**	**15/12 1989**	**27.2**	**10.21**	**3.92**
M.A: SEPA-N	Local No: Sens.: 4.7 B/full: 200.0m^3s^{-1}													
F.A.R: N	Level: 55m UE: <.01 FAI: 0.997													
Comment: Cableway rated, natural control. Flow records from 1/07/69. Continuous recording since 1971. Transferred from Grampian Regional Council in 1984. Levels can be affected by ice. High flows 1969-83 reprocessed in 1986. Natural regime. # Mainly Dalradian metamorphics with large amounts of basic intrusives and a small pocket of ORS. High moorland, forestry, pastoral and arable in lower valleys.		1996	844	93	572	103	14.23	133.9	10/02	3.56	01/10	27.2	10.75	3.91
		1997	892	98	482	87	12.04	95.0	01/07	4.10	31/10	24.3	8.48	4.55
		1998	1088	120	744	134	18.57	190.0	04/04	6.68	10/07	31.2	15.22	8.39
		1999	978	108	589	106	14.70	111.3	24/12	4.36	05/09	26.2	12.39	5.14
		2000	1187	131	816	147	20.32	222.3	26/04	4.79	06/08	36.9	14.83	5.51
011004	**Urie at Pitcaple** C.A: 198.0 km^2	**89-95**	**783**		**386**		**2.42**	**70.7**	**11/09 1995**	**0.61**	**22/08 1994**	**4.6**	**1.85**	**0.73**
M.A: SEPA-N	Local No: Sens.: 12.2 B/full: 30.0m^3s^{-1}													
F.A.R: N	Level: 67m UE: <.01 FAI: 0.996													
Comment: Velocity-area station with natural control and cableway, replaced 11801. All flows contained. Good low flow performance. Natural regime, no abstractions. # Moorland headwaters, substantial areas of mixed and arable farming below. Geology: dominately metamorphic.		1996	813	104	501	130	3.14	39.3	10/02	0.71	30/09	6.4	2.22	0.77
		1997	858	110	400	104	2.51	23.0	01/07	0.93	31/10	5.2	1.91	0.99
		1998	1087	139	677	175	4.25	33.2	04/04	1.61	09/07	6.8	3.59	2.04
		1999	970	124	529	137	3.32	32.1	24/12	1.00	05/09	5.8	2.87	1.16
		2000	1135	145	695	180	4.35	55.1	26/04	1.29	12/08	7.7	3.39	1.48
011001	**Don at Parkhill** C.A: 1273.0 km^2	**69..95**	**877**		**488**		**19.70**	**301.4**	**12/09 1995**	**3.55**	**15/12 1989**	**39.1**	**14.50**	**5.28**
M.A: SEPA-N	Local No: Sens.: 6.8 B/full: 460.0m^3s^{-1}													
F.A.R: N	Level: 32m UE: <.01 FAI: 0.998													
Comment: Lowest of three gauging stations on the Don. Cableway rated with natural control. Complex rating history. Weed growth a problem during summer half-year. Flow records for 1969-86 reprocessed in 1987; significant revisions in high and low flow range. Natural regime. # Mainly Dalradian metamorphics with large amounts of basic intrusives and a small pocket of Old Red Sandstone. High moorland, forestry, pastoral and arable in lower valleys.		1996	828	94	511	105	20.59	255.2	10/02	4.84	01/10	39.9	14.87	5.32
		1997	883	101	442	91	17.83	122.3	21/11	5.99	31/10	39.2	12.10	6.53
		1998	1062	121	678	139	27.36	286.2	05/04	8.81	10/07	46.7	22.37	11.52
		1999	936	107	520	107	20.99	139.8	25/12	5.64	31/08	36.7	17.61	6.51
		2000	1133	129	723	148	29.11	343.6	27/04	6.31	23/07	52.6	21.17	7.35

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
012007	**Dee at Mar Lodge** C.A: 289.0 km^2	**82..95**	**1461**		**1356**		**12.43**	**307.8**	**04/02 1990**	**0.64**	**22/08 1994**	**25.3**	**8.54**	**1.96**
M.A: SEPA-N	Local No: Sens.: 12.5 B/full: 250.0m^3s^{-1}													
F.A.R: N	Level: 332m UE: <.01 FAI: 0.990													
Comment: Highest gauging station on the Dee. Cableway rated, unstable natural control. Catchment rainfall totals may be significantly underestimated. # Dalradian and Moinian metamorphic and granite mountains. Mountain, moorland, some forestry.		1996	1126	77	1035	76	9.46	177.7	08/01	0.91	23/09	22.7	5.83	1.35
		1997	1344	92	1239	91	11.36	216.6	01/03	1.34	26/08	23.1	6.86	1.96
		1998	1494	102	1402	103	12.85	138.6	22/04	3.02	09/07	26.7	9.12	3.68
		1999	1482	101	1405	104	12.88	199.7	23/12	1.48	04/09	25.5	8.86	1.92
		2000	1490	102	1707	126	15.60	194.3	30/01	2.13	27/07	34.0	10.69	3.13
012004	**Girnock Burn at Littlemill** C.A: 30.3 km^2	**69..95**	**996**		**529**		**0.51**	**100.1**	**09/09 1995**	**0.01**	**22/06 1992**	**1.0**	**0.28**	**0.04**
M.A: SEPA-N	Local No: Sens.: 21.7 B/full: 40.0m^3s^{-1}													
F.A.R: N	Level: 245m UE: <.01 FAI: 1.000													
Comment: Velocity-area station rated by wading. Recalibrated in 1994. Natural flow regime. # High moorland, pastoral. Dalradian and older basic intrusive rocks.		1996	850	85	576	109	0.55	55.3	08/01	0.04	21/07	1.0	0.25	0.05
		1997	976	98	550	104	0.53	28.7	19/02	0.08	26/08	1.1	0.21	0.09
		1998	1090	109	639	121	0.61	18.1	05/04	0.09	24/09	1.2	0.34	0.11
		1999	940	94	529	100	0.51	21.2	22/12	0.03	03/09	1.0	0.25	0.03
		2000	1228	123	842	159	0.81	19.8	10/10	0.06	22/07	1.6	0.48	0.09
012003	**Dee at Polhollick** C.A: 690.0 km^2	**75..95**	**1311**		**1063**		**23.25**	**469.2**	**04/02 1990**	**2.10**	**01/09 1983**	**48.1**	**16.32**	**4.52**
M.A: SEPA-N	Local No: Sens.: 7.3 B/full: 250.0m^3s^{-1}													
F.A.R: N	Level: 217m UE: <.01 FAI: 0.990													
Comment: Velocity-area station, cableway rated with natural control. Natural flow regime. # Dalradian and Moinian metamorphics with basic intrusions. Mountain, moorland and pastoral.		1996	1058	81	926	87	20.20	313.4	08/01	3.07	19/08	45.8	13.28	3.70
		1997	1238	94	1037	98	22.70	354.5	01/03	4.03	26/08	49.8	13.21	4.98
		1998	1375	105	1174	110	25.69	213.1	22/04	6.36	09/07	52.1	19.45	7.97
		1999	1333	102	1142	107	24.98	334.0	22/12	3.54	04/09	45.3	18.39	4.36
		2000	1449	111	1416	133	30.89	263.7	10/10	4.45	27/07	65.1	21.25	5.79
012006	**Gairn at Invergairn** C.A: 150.0 km^2	**78..95**	**1005**		**810**		**3.85**	**95.1**	**02/10 1981**	**0.45**	**04/08 1982**	**7.5**	**2.78**	**0.82**
M.A: SEPA-N	Local No: Sens.: 8.9 B/full: 40.0m^3s^{-1}													
F.A.R: N	Level: 218m UE: <.01 FAI: 0.997													
Comment: Velocity-area station with cableway, natural control includes rubble from early gabion construction (broken up by spate of Nov 1978). Good site for low flow measurement. Sensibly natural regime. Catchment rainfall may be underestimated. # Some Dalradian metamorphics, mainly granite intrusive. Pastoral and mountain moorland.		1996	920	92	648	80	3.08	39.9	08/01	0.58	18/08	5.9	2.25	0.66
		1997	1001	100	692	85	3.29	31.6	01/07	0.77	05/10	6.6	2.10	0.86
		1998	1153	115	934	115	4.44	57.8	04/04	1.15	09/07	7.6	3.35	1.50
		1999	1103	110	843	104	4.01	58.3	20/09	0.63	04/09	7.3	3.21	0.80
		2000	1289	128	1132	140	5.37	71.8	08/08	0.82	26/07	9.7	3.83	1.05
012005	**Muick at Invermuick** C.A: 110.0 km^2	**76..95**	**1326**		**1052**		**3.67**	**470.6**	**02/10 1981**	**0.30**	**21/08 1995**	**7.2**	**2.50**	**0.60**
M.A: SEPA-N	Local No: Sens.: 9.0 B/full: 60.0m^3s^{-1}													
F.A.R: N	Level: 201m UE: <.01 FAI: 0.961													
Comment: Cableway rated, natural control. Problems with silting in well (until 1980) and ice in cold winters (flows may be estimated). Natural regime - no abstractions. # Dalradian intrusive basics. Pastoral and mountain moorland.		1996	1170	88	1066	101	3.71	96.4	08/01	0.43	19/08	8.4	2.54	0.48
		1997	1320	100	1138	108	3.97	99.3	18/11	0.59	05/10	8.7	2.09	0.71
		1998	1473	111	1158	110	4.04	49.7	24/10	0.83	31/08	7.5	3.07	1.14
		1999	1244	94	1033	98	3.60	119.4	20/09	0.37	04/09	6.7	2.51	0.51
		2000	1601	121	1486	141	5.17	92.6	19/09	0.65	27/07	11.3	3.46	0.98
012001	**Dee at Woodend** C.A: 1370.0 km^2	**29..95**	**1121**		**840**		**36.49**	**1133.0**	**24/01 1937**	**3.54**	**27/08 1976**	**72.8**	**25.81**	**8.24**
M.A: SEPA-N	Local No: Sens.: 5.1 B/full: 1000.0m^3s^{-1}													
F.A.R: N	Level: 71m UE: <.01 FAI: 0.985													
Comment: Cableway rated, fairly stable natural control. Present station (built in 1972) replaced earlier station (flow records from 1929, chart records from 1934) on same reach. C/m measurements at Woodend established by Capt. McClean. Earlier staff gauge record dates from 1911. No regulation, little natural storage, minor abstractions. # Dalradian and Moinian metamorphics along most of valley, flanked by igneous intrusives. Mountain, moorland, forestry, pastoral and some arable in valley bottom.		1996	990	88	809	96	35.03	473.4	08/01	4.96	19/08	78.7	25.97	5.97
		1997	1124	100	843	100	36.62	456.2	18/11	7.27	04/10	79.2	20.67	8.12
		1998	1259	112	1004	120	43.63	392.2	04/04	11.42	09/07	81.2	33.42	14.57
		1999	1178	105	922	110	40.05	470.8	20/09	6.20	05/09	72.0	31.04	8.00
		2000	1355	121	1210	144	52.42	469.4	10/10	7.73	26/07	108.8	36.43	9.90
012009	**Water of Dye at Charr** C.A: 41.7 km^2	**57..95**	*1251*		**979**		**1.29**	**42.7**	**09/11 1994**	**0.09**	**20/08 1994**	**2.6**	**0.61**	**0.17**
M.A: SEPA-N	Local No: Sens.: 8.2 B/full: 30.0m^3s^{-1}													
F.A.R: P	Level: m UE: FAI:													
Comment: Compound critical-depth flume (constructed by Grampian Regional Council, repaired in 1983). Large capacity; flows >30 m^3s^{-1} estimated. Mixed flow series comprising lengthy runs of naturalised and gauged flows. Very responsive regime - natural apart from PWS abstraction (for Stonehaven) - export of approx. 0.05 m^3s^{-1} (around 5% of mean runoff), significant at low flows. Peak flows from Aug 1990 only. Incomplete chart records from 1963. # A rugged moorland (exclusively) catchment developed principally on granite.		1996	1284	103	1067	109	1.41	33.3	04/02	0.15	18/08	3.4	0.73	0.17
		1997	1310	105	935	96	1.24	37.0	18/11	0.20	02/05	2.3	0.50	0.23
		1998	1494	119	1141	117	1.51	35.2	04/04	0.23	09/07	3.1	0.76	0.31
		1999	1198	96	832	85	1.10	37.0	20/04	0.13	03/09	2.1	0.61	0.18
		2000	1615	129	1215	124	1.60	31.7	30/07	0.16	27/07	3.7	0.81	0.22
012008	**Feugh at Heugh Head** C.A: 229.0 km^2	**85..95**	**1106**		**734**		**5.33**	**271.5**	**30/11 1985**	**0.43**	**20/08 1994**	**10.7**	**3.08**	**0.81**
M.A: SEPA-N	Local No: Sens.: 6.6 B/full: 250.0m^3s^{-1}													
F.A.R: PN	Level: 69m UE: <.01 FAI: 0.999													
Comment: Velocity-area station with cableway. Good site for low flow measurement. Abstraction (at Charr, PWS for Stonehaven) accounts for <5% of Q95 flow. # Rugged topography, mostly moorland and upland pasture (some afforestation in Glen Dye) developed largely on granites and metamorphics.		1996	1136	103	911	124	6.60	167.8	10/02	0.75	19/08	13.4	3.88	0.88
		1997	1179	107	801	109	5.82	159.6	18/11	0.93	08/10	12.1	2.52	1.02
		1998	1356	123	1001	136	7.27	193.4	04/04	1.25	09/07	13.8	4.35	1.68
		1999	1105	100	701	96	5.09	138.4	24/12	0.78	05/09	9.2	3.20	1.03
		2000	1459	132	1066	145	7.72	200.9	26/04	0.74	27/07	15.2	4.24	1.04
012002	**Dee at Park** C.A: 1844.0 km^2	**72..95**	**1101**		**786**		**45.96**	**922.4**	**13/10 1982**	**3.66**	**27/08 1976**	**94.4**	**33.29**	**8.43**
M.A: SEPA-N	Local No: Sens.: 5.5 B/full: 500.0m^3s^{-1}													
F.A.R: PN	Level: 23m UE: <.01 FAI: 0.987													
Comment: Cableway rated, unstable natural control causing frequent changes in rating. Abstraction for PWS of approximately 0.7 m^3s^{-1} between Woodend (12001) and Park (accounts for almost 10% of Q95 flow). # Dalradian and Moinian metamorphics along most of valley, flanked by igneous intrusives. Mountain, moorland, forestry, pastoral and some arable in valley bottom.		1996	995	90	761	97	44.37	576.3	08/01	5.47	24/09	95.1	32.44	6.67
		1997	1108	101	767	98	44.85	623.7	18/11	7.67	05/10	101.0	23.99	9.17
		1998	1247	113	954	121	55.79	612.0	04/04	13.81	10/07	105.1	42.39	17.92
		1999	1132	103	819	104	47.88	552.9	22/12	6.64	05/09	87.6	37.67	9.07
		2000	1339	122	1073	137	62.59	662.0	10/10	8.40	27/07	123.7	42.81	11.17
013001	**Bervie at Inverbervie** C.A: 123.0 km^2	**79..95**	**894**		**521**		**2.03**	**61.0**	**13/10 1982**	**0.24**	**31/08 1983**	**4.2**	**1.23**	**0.33**
M.A: SEPA-N	Local No: Sens.: 15.1 B/full: 44.0m^3s^{-1}													
F.A.R: N	Level: 70m UE: <.01 FAI: 0.999													
Comment: Cableway rated. De-stabilised artificial control replaced by gabions in 1989. Extreme floods bypass the station (via the rb floodplain). Natural flow regime. # Arable in valley, pastoral on hills and some forestry. ORS.		1996	845	95	548	105	2.13	41.7	10/02	0.28	23/09	4.9	1.33	0.31
		1997	919	103	490	94	1.91	36.8	27/11	0.46	13/10	3.9	1.03	0.50
		1998	1051	118	720	138	2.81	34.7	04/04	0.61	10/07	4.9	2.01	0.78
		1999	835	93	475	91	1.85	32.8	24/12	0.39	12/08	3.5	1.43	0.45
		2000	1065	119	681	131	2.65	52.0	26/04	0.40	07/08	5.3	1.53	0.46
090003	**Nevis at Claggan** C.A: 76.8 km^2	**82..95**	**3173**		**2761**		**6.72**	**219.0**	**18/09 1990**	**0.13**	**12/06 1992**	**16.4**	**3.39**	**0.62**
M.A: SEPA-N	Local No: 121 Sens.: 9.2													
F.A.R: P	Level: 4m UE: FAI:													
Comment: 20m wide river section with boulder control. All flows contained. Difficulty in gauging low flows results in a scattered low flow rating. Computed flows very largely natural (runoff from 6.7 sq.km of the headwaters diverted to Loch Trieg and, further d/s, around 5% of Q95 is abstracted for PWS). # Wet, steep-sided, high altitude catchment draining southern slopes of Ben Nevis with no storage. Prolonged winter snow cover.		1996	2276	72	1838	67	4.46	89.4	02/11	0.33	23/09	11.1	2.29	0.60
		1997	2852	90	2366	86	5.76	101.6	05/12	0.50	04/06	15.8	2.45	0.70
		1998	3430	108	2840	103	6.92	141.1	11/02	0.31	05/06	17.1	4.01	0.62
		1999	3490	110	3093	112	7.53	162.4	05/12	0.32	12/08	18.2	3.98	0.95
		2000	3074	97	2847	103	6.91	110.4	29/11	0.45	27/07	18.3	3.26	0.74

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
092001	**Shiel at Shielfoot** C.A: 256.0 km^2	95..95						**64.8**	**25/10 1995**	**1.86**	**23/08 1995**			
M.A: SEPA-N	Local No: Sens.:													
F.A.R:	Level: m UE: FAI:													
Comment: Velocity-area station with cableway, d/s of Loch Shiel. Gravel bed and some seasonal weedgrowth, but relatively stable rating and sensibly a full range station. Natural flow regime. # Wet, mountainous catchment with some afforestation in the glens.		1996	2451		2075		16.80	72.7	06/11	1.90	23/09	37.5	12.84	3.11
		1997	2814		2390		19.40	67.1	20/02	1.86	30/06	43.7	15.19	3.40
		1998	3264		2880		23.38	112.9	13/02	1.72	07/06	43.6	19.06	3.31
		1999	3479		3036		24.65	78.1	06/12	4.01	12/08	45.6	21.22	6.23
		2000	3071		2703		21.88	73.4	10/03	2.01	30/07	52.6	15.97	2.71
093001	**Carron at New Kelso** C.A: 137.8 km^2	**79-95**	**2897**		**2549**		**11.14**	**337.4**	**18/09 1990**	**0.43**	**24/06 1982**	**27.2**	**5.59**	**1.02**
M.A: SEPA-N	Local No: 115 Sens.: 15.4													
F.A.R: N	Level: 6m UE: <.01 FAI: 0.884													
Comment: 40m wide river section with floodbank on right. Any bypassing in extreme floods will be over 30m wide floodplain on left bank. Unstable gravel control requires regular calibration of low flow range. Adequately gauged to bankfull. Computed flows are 100% natural. 70% of catchment drains through Loch Dughaill with little additional surface storage. # Typical mix of rough grazing and moorland. One of the wetter Highland catchments currently gauged.		1996	1943	67	1732	68	7.55	166.7	02/11	0.65	24/09	18.7	3.50	0.94
		1997	2409	83	2058	81	8.99	129.1	12/01	0.81	09/06	22.3	3.91	1.13
		1998	3082	106	2811	110	12.28	186.7	11/02	0.83	07/10	28.6	7.44	1.31
		1999	2949	102	2945	116	12.87	223.7	05/12	0.61	11/08	30.0	7.72	1.18
		2000	2478	86	2419	95	10.54	185.6	06/03	0.79	26/07	25.5	5.41	1.01
094001	**Ewe at Poolewe** C.A: 441.1 km^2	**70..95**	**2502**		**2133**		**29.83**	**247.7**	**06/02 1989**	**1.96**	**18/05 1974**	**63.8**	**22.07**	**5.35**
M.A: SEPA-N	Local No: 103 Sens.: 3.4													
F.A.R: N	Level: 5m UE: <.01 FAI: 0.670													
Comment: 50m wide river section with stable (rock amoured) control which has been modified infrequently resulting in recalibration of low flows. No overbank flow. Rating improved following installation of cableway in 1970. In excess of 95% of the catchment drains through Loch Maree with a surface area of 30km which dominates the flow regime. Low to medium flows from 3% of the upper catchment diverted to Conon hydro scheme. # Catchment is typical Highland uplands.		1996	1672	67	1519	71	21.19	126.1	03/11	4.17	07/02	42.0	14.78	5.12
		1997	2144	86	1934	91	27.05	140.6	01/03	5.52	11/06	58.5	19.48	6.76
		1998	2755	110	2456	115	34.35	188.7	13/02	5.59	07/06	63.8	27.44	8.10
		1999	2782	111	2479	116	34.67	125.8	06/12	5.06	14/08	67.3	28.27	7.18
		2000	2322	93	2131	100	29.72	129.4	07/03	3.63	17/05	72.4	17.10	4.96
095002	**Broom at Inverbroom** C.A: 141.4 km^2	**85..95**	**2172**		**1700**		**7.62**	**237.4**	**05/02 1989**	**0.21**	**21/08 1995**	**18.3**	**3.74**	**0.53**
M.A: SEPA-N	Local No: 123 Sens.: 18.2													
F.A.R: H	Level: 5m UE: FAI:													
Comment: 25m wide river section. Floodbank on lb protects a wide cultivated floodplain. Unstable gravel control, significant low flow gaugings scatter. Slightly skew velocity in high flows. Adequately calibrated to bankfull (150 m^3s^{-1}). 20% of natural catchment diverted (except overflows) via Loch Droma to Conon HEP scheme. 25% of upper catchment drains through the only additional surface storage in Loch a' Bhraoin. # Catchment typically Scottish upland except for a very narrow cultivated band on the lower valley floor.		1996	1527	70	948	56	4.24	96.3	18/10	0.38	24/09	9.9	1.93	0.53
		1997	1976	91	1350	79	6.06	153.7	01/03	0.42	10/06	14.7	2.59	0.54
		1998	2462	113	1788	105	8.02	108.7	09/01	0.44	08/10	18.6	4.79	0.80
		1999	2525	116	1852	109	8.30	147.7	05/12	0.34	11/08	19.7	4.87	0.63
		2000	2270	105	1720	101	7.69	137.0	30/01	0.40	04/08	20.2	3.31	0.64
095001	**Inver at Little Assynt** C.A: 137.5 km^2	**77..95**	**2211**		**1956**		**8.53**	**63.6**	**06/02 1989**	**0.57**	**27/05 1995**	**16.7**	**6.92**	**1.89**
M.A: SEPA-N	Local No: 111 Sens.: 6.3													
F.A.R: N	Level: 60m UE: FAI:													
Comment: 30m wide completely contained river section with adequately gauged stable calibration in excess of MAF. Flow regime completely natural except for occasional operation of gates for fisheries purposes. The gates are immediately u/s at outlet to Loch Assynt (surface area: 7.9 sq.km) and can result in very low flows (see, for example, May/June 1998). # Catchment is rough grazing and moorland with many lochans.		1996	1800	81	1455	74	6.33	37.4	03/11	1.02	09/02	12.7	4.36	1.34
		1997	2088	94	1650	84	7.20	30.4	01/03	1.63	11/06	13.0	6.22	2.59
		1998	2585	117	2303	118	10.04	58.4	12/02	0.98	04/06	17.4	8.42	2.18
		1999	2555	116	2123	109	9.25	38.2	06/12	1.15	28/08	17.1	8.13	1.62
		2000	2366	107	2017	103	8.77	38.4	10/03	1.08	04/08	19.7	5.54	1.66
096004	**Strathmore at Allnabad** C.A: 105.0 km^2	**87..95**	**2611**		**2283**		**7.60**	**255.3**	**11/12 1990**	**0.13**	**21/08 1995**	**18.9**	**3.64**	**0.42**
M.A: SEPA-N	Local No: 128 Sens.:													
F.A.R: N	Level: 87m UE: FAI:													
Comment: Velocity-area station with degraded gabion control. Extreme low flows measured 2 km d/s (C.A. increase: 7 sq.km). Natural and very responsive flow regime; moderate storage in headwater lochans. # Wet, rugged, upland catchment developed principally on metamorphics of the Moinian Series. Moorland and rough grazing dominate land use.		1996	1967	75	1616	71	5.36	147.1	02/11	0.34	24/09	14.2	2.51	0.50
		1997	2624	100	1975	87	6.58	232.6	04/04	0.35	10/06	16.0	3.04	0.61
		1998	2905	111	2454	107	8.17	185.7	15/09	0.50	07/10	18.8	4.83	0.73
		1999	2940	113	2498	109	8.32	**311.4**	**05/12**	0.27	11/08	18.5	4.56	0.47
		2000	2856	109	2294	100	7.62	174.5	10/03	0.22	16/05	18.0	3.95	0.44
096002	**Naver at Apigill** C.A: 477.0 km^2	**77..95**	**1476**		**1042**		**15.76**	**234.0**	**04/10 1981**	**0.33**	**04/07 1992**	**36.3**	**10.21**	**1.12**
M.A: SEPA-N	Local No: 112 Sens.: 10.9													
F.A.R: N	Level: 5m UE: <.01 FAI: 0.843													
Comment: 40m wide river section with short 6m floodplain on rb but otherwise completely contained. Gravel control - regular need to reassess low flow rating. Calibrated to bankfull. Computed flows 98% natural with small interbasin transfer to the Shin hydro-electric scheme. Several small high level lochs in addition to the total surface area of Lochs Coire, Meadie and Naver of 13 sq.km. 50% of the catchment drains through the latter. # Catchment is typical Highland mix of rough grazing and moorland. Relatively little loch storage.		1996	1132	77	774	74	11.67	127.9	02/12	0.68	20/08	28.1	5.44	0.89
		1997	1329	90	851	82	12.87	140.1	01/03	1.21	24/08	29.0	7.18	1.95
		1998	1651	112	1242	119	18.78	102.4	12/02	1.34	06/06	41.9	13.88	2.37
		1999	1680	114	1270	122	19.21	175.8	06/12	1.01	04/09	40.0	14.32	1.73
		2000	1545	105	1219	117	18.39	162.1	08/11	1.49	12/08	47.5	9.95	2.00
096003	**Strathy at Strathy Bridge** C.A: 111.8 km^2	**85..95**	**1087**		**745**		**2.64**	**84.3**	**16/08 1990**	**0.10**	**05/07 1992**	**6.4**	**1.38**	**0.17**
M.A: SEPA-N	Local No: 125 Sens.: B/full: 30.0m^3s^{-1}													
F.A.R: N	Level: 5m UE: FAI:													
Comment: 15m wide river section with bypassing on the rb during extreme flood events in excess of 50 m^3s^{-1}. Stable pitched river bed control with gabion mattress constriction to increase sensitivity. Adequately gauged to bankfull. Computed flows 100% natural. # No significant surface storage but several small hill lochs on a low altitude, gently sloping peat-covered catchment extensively afforested from the late 1970s.		1996	953	88	603	81	2.13	35.2	02/12	0.13	20/08	5.5	0.73	0.15
		1997	1136	105	715	96	2.53	52.9	01/07	0.18	07/08	5.6	1.32	0.25
		1998	1351	124	982	132	3.48	49.8	12/02	0.25	05/06	8.9	2.18	0.38
		1999	1333	123	887	119	3.14	45.8	28/11	0.20	04/09	7.7	1.72	0.24
		2000	1196	110	854	115	3.02	58.5d	08/11	0.26	31/07	6.7	1.62	0.30
096001	**Halladale at Halladale** C.A: 204.6 km^2	**76-95**	**1140**		**775**		**5.03**	**189.1**	**21/09 1981**	**0.12**	**26/08 1984**	**12.9**	**2.30**	**0.26**
M.A: SEPA-N	Local No: 109 Sens.: 21.3													
F.A.R: N	Level: 23m UE: <.01 FAI: 0.969													
Comment: 20m wide river section adequately gauged to bankfull. Computed flows 100% natural. # Catchment is largely moorland with a peat based cover. Extensive afforestation from late 1970s.		1996	924	81	621	80	4.02	58.1	10/02	0.22	24/09	11.4	1.49	0.24
		1997	1102	97	672	87	4.36	104.6	01/07	0.31	09/06	11.1	1.94	0.42
		1998	1380	121	991	128	6.43	86.3	27/12	0.31	04/06	17.8	3.63	0.45
		1999	1317	116	938	121	6.08	113.4	05/12	0.22	04/09	15.4	3.18	0.40
		2000	1251	110	839	108	5.43	97.7	29/10	0.28	13/08	13.3	2.24	0.41
097002	**Thurso at Halkirk** C.A: 412.8 km^2	**72-95**	**1061**		**660**		**8.64**	**173.1**	**06/10 1993**	**0.22**	**22/08 1976**	**20.2**	**5.09**	**0.54**
M.A: SEPA-N	Local No: 104 Sens.: 19.1													
F.A.R: RP	Level: 30m UE: <.01 FAI: 0.872													
Comment: 30m wide river section with full containment and a completely stable rock bar control. Adequately rated to bankfull but difficulty in c/m low flows. 50% of catchment drains through Loch More which is used for river regulation. Average net abstraction from Loch Calder of some 5% of the computed long-term average runoff. # Catchment characterised by small lochs on predominantly blanket peat cover. Extensive afforestation of upper catchment from late 1970s.		1996	930	88	565	86	7.38	98.0	04/11	0.44	19/08	18.9	3.53	0.52
		1997	1039	98	595	90	7.79	91.4	16/03	1.12	09/10	18.1	4.40	1.49
		1998	1322	125	920	139	12.04	89.0	17/10	1.47	05/06	28.2	7.81	2.42
		1999	1168	110	810	123	10.60	107.4	06/12	1.24	05/09	25.0	6.77	2.14
		2000	1138	107	809	123	10.56	92.1	14/12	0.59	12/08	25.0	6.22	0.71
106001	**Creed at Creed Bridge** C.A: 43.4 km^2	93..94	1464		1017		1.40	10.8	21/03 1994	0.06	18/09 1993			
M.A: SEPA-N	Local No: Sens.:													
F.A.R: IN	Level: 37m UE: FAI:													
Comment: Asymmetrical compound Crump weir - 8.6m main crest with 0.6m low flow crest on lhs - immediately d/s of sharp rh bend. Theoretical rating. Structure capacity: c15 m^3s^{-1}, overtopped by flood peaks. Levels monitored by pressure transducer - monthly offsets applied, based on dip-flash readings. Small fish-hatchery abstraction immediately u/s - can influence low flows - otherwise an entirely natural regime. # Gently-sloping peat-covered catchment near Stornaway. Heather moorland developed on ancient metamorphics mostly Lewisian gneiss. Many lochans in S of the catchment. Some future afforestation likely, current land-use mostly sheep-grazing.		1996	1281	88											
		1997	1543	105										
		1998	1638	112										
		1999	1740	119	1494	147	2.06	15.8	27/11	0.15	07/05	4.6	1.54	0.16
		2000	1633	112	1372	135	1.88	28.1	29/10	0.06	06/08	4.1	1.25	0.13

Map 2: SEPA — EAST



Area: 17,810 km^2

Average Rainfall (1961–90): 1132 mm

Gauging Station Register

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
013009	West Water	Dalhouse Bridge	NO	592680	127.2	VA	1985–00	1150	941	209	**1211**	**00**	591	89	3.80	0.55	08/95		.54	7.8	0.79
013002	Luther Water	Luther Bridge	NO	658674	138.0	VA	1982–00	928	508	420	774	84	237	89	2.22	0.30	08/95		.58	4.5	0.40
013007	North Esk	Logie Mill	NO	699640	732.0	CC	1976–00	1127	827	300	**1074**	**00**	476	89	19.19	2.33	08/95		.52	39.3	3.17
013012	South Esk	Gella Bridge	NO	372653	130.0	VA	1991–00	1485	1320	165	1710	00	1088	92	5.44	0.62	08/95		.47	11.6	0.94
013004	Prosen Water	Prosen Bridge	NO	396586	104.0	VA	1985–00	1280	943	337	**1231**	**00**	698	89	3.11	0.46	08/95		.57	6.2	0.66
013003 *	South Esk	Stannochy Br	NO	583593	487.0	VA	1979–82	1192	861	331	1063	82	679	81	13.30	1.98	08/81		.53	26.8	2.25
013008	South Esk	Brechin	NO	600596	488.0	VA	1983–00	1152	788	364	**995**	**00**	537	89	12.19	1.40	08/84		.55	25.2	2.13
013005	Lunan Water	Kirkton Mill	NO	655494	124.0	VA	1981–00	795	408	387	625	85	158	89	1.61	0.12	08/95		.52	3.6	0.18
013017	Colliston Burn	Colliston	NO	609466	8.4	VA	1994–00	791	462	329	634	98	360	99	0.12	>0.00	09/94		.33	0.3	>0.00
013010	Brothock Water	Arbroath	NO	639418	50.0	VA	1989–00	703	324	379	**460**	**00**	132	89	0.51	0.08	08/95		.47	1.1	0.08
014006 *	Monikie Burn	Panbride	NO	574361	16.0	VA	1987–91	749	367	382	591	88	171	89	0.19	0.01	08/89		.44	0.4	0.01
014007	Craigmill Burn	Craigmill	NO	575360	29.0	VA	1987–00	802	337	465	**509**	**98**	141	89	0.31	0.01	08/94		.40	0.7	0.02
014002	Dighty Water	Balmossie Mill	NO	477324	126.9	VA	1969–00	788	379	409	551	85	121	73	1.53	0.17	08/84		.59	3.3	0.23
014010	Motray Water	Kilmany	NO	387217	33.0	VA	1991–00	761	288	473	456	93	217	99	0.30	0.01	08/95		.53	0.7	0.02
014005	Motray Water	St Michaels	NO	441224	60.0	VA	1984–00	745	283	462	468	85	119	89	0.54	0.06	08/95		.57	1.2	0.08
014009	Eden	Strathmiglo	NO	226102	26.0	VA	1991–00	1027	603	424	805	00	480	96	0.50	0.08	08/95		.55	1.0	0.10
014001	Eden	Kemback	NO	415158	307.4	VA	1967–00	806	401	405	578	93	148	73	3.90	0.73	08/95	43.3	.62	8.1	0.96
015024	Dochart	Killin	NN	564320	239.0	VA	1982–00	2781	2149	632	2681	90	1552	87	16.29	0.88	08/95		.26	42.2	1.16
015016	Tay	Kenmore	NN	782467	600.9	VA	1974–00	2257	2490		3025	90	**1837**	**96**	47.45	2.07	08/84	187.0	.65	101.1	6.72
015018 *	Lyon	Moar	NN	534448	161.4	VA	1953–58	2077	1983	94	2853	54	1500	55	10.15	0.51	08/55		.22	26.1	0.66
015041	Lyon	Camusvrachan	NN	620477	237.0	VA	1992–00	2403	884	1519	979	00	752	96	6.64	2.12	08/95		.49	13.2	2.14
015011	Lyon	Comrie Bridge	NN	786486	391.1	VA	1958–00	2002	980	1022	1602	58	672	73	12.15	2.22	08/84		.45	27.1	2.98
015007	Tay	Pitnacree	NN	924534	1149.4	VA	1957–00	1950	1575	375	2147	90	1152	73	57.41	4.32	08/84	331.6	.64	116.1	12.64
015038	Gaur	Bridge of Gaur	NN	497570	247.0	VA	1992–00	2194	1890	304	2393	92	1225	96	14.80	1.18	08/95		.33	33.2	1.21
015035 *	Tummel	Kinloch Rannoch	NN	663588	647.0	VA	1991–00	1927	2163		2453	94	1569	96	44.37	9.66	09/96		.59	84.2	9.33
015039	Tilt	Marble Lodge	NN	892717	165.0	VA	1992–00	1385	1374	11	1588	00	1117	96	7.19	1.00	08/95		.42	15.9	1.24
015034	Garry	Killiecrankie	NN	901637	745.0	VA	1991–00	1479	732	747	865	94	529	96	17.29	2.27	08/95		.43	35.6	3.14
015012	Tummel	Pitlochry	NN	947574	1670.0	VA	1973–00	1570	1384	186	1692	90	**1023**	**96**	73.27	**13.84**	**09/96**		.63	145.4	19.05
015017 *	Braan	Ballinloan	NN	979406	197.0	VA	1975–80	1329	959	370	1058	77	914	80	5.99	0.36	07/77	120.1	.38	15.6	0.38
015023	Braan	Hermitage	NO	014422	210.0	VA	1983–00	1495	1058	437	1245	88	820	87	7.05	0.26	08/95		.44	16.5	0.55
015003	Tay	Caputh	NO	082395	3210.0	VA	1947–00	1638	1368	270	1850	90	883	55	139.20	9.60	08/55	784.0	.64	274.8	35.47
015001 *	Isla	Forter	NO	187647	70.7	FL	1953..68	1405	1207	198	1496	62	752	64	2.71	0.66	07/64	43.7	.57	5.2	0.74
015002 *	Newton Burn	Newton	NO	230605	15.4	TP	1959..68	1303	997	306	1392	60	696	64	0.49	0.14	08/68	6.9	.59	1.0	0.14
015005 *	Melgan	L of Lintrathen	NO	275558	40.9	TP	1927..68	1151	767	384	1164	28	561	64	1.00	0.07	09/68	15.5	.58	2.1	0.24
015004 *	Inzion	L of Lintrathen	NO	280559	24.7	TP	1927..68	1115	710	405	1052	60	499	64	0.56	0.09	08/33	6.4	.63	1.1	0.14
015029 *	Alyth Burn	Pitcrocknie	NO	257485	32.0	VA	1991–94	943	419	524	497	93	367	91	0.43	0.03	07/94		.46	1.0	0.04
015010	Isla	Wester Cardean	NO	295466	366.5	VA	1972–00	1133	655	478	919	82	349	73	7.61	0.96	08/95	100.8	.54	16.1	1.51
015008	Dean Water	Cookston	NO	340479	177.1	VA	1958..00	843	468	375	673	60	261	89	2.63	0.42	08/95	30.0	.58	5.6	0.60
015030	Dean Water	Dean Bridge	NO	293458	230.0	VA	1990–00	833	487	346	652	93	341	90	3.55	0.44	08/95		.56	8.0	0.65
015014	Ardle	Kindrogan	NO	056631	103.0	VA	1985–00	1285	1011	274	**1248**	**00**	792	87	3.30	0.30	07/89		.41	7.5	0.44
015025	Erncht	Craighall	NO	174472	432.0	VA	1985–00	1251	953	298	**1133**	**00**	746	87	13.06	1.17	08/95		.49	28.8	1.90
015021	Lunan Burn	Mill Bank	NO	182400	94.0	VA	1984–00	945	508	437	660	88	327	89	1.51	0.08	08/95		.65	3.4	0.15
015006	Tay	Ballathie	NO	147367	4587.1	VA	1952–00	1463	1149	314	1479	90	738	55	167.20	14.70	08/55	951.1	.64	332.5	42.54
015032 *	Ordie Burn	Jackstone	NO	070337	20.0	VA	1990–96	1049	724	325	948	93	550	91	0.46	0.01	08/95		.38	1.1	0.02
015027	Garry Burn	Loakmill	NO	075339	20.0	VA	1987–00	1035	643	392	878	93	520	89	0.41	0.01	08/95		.46	1.0	0.04
015028	Ordie Burn	Luncarty	NO	090312	54.0	VA	1986–00	1036	662	374	917	93	522	89	1.13	0.05	08/95		.45	2.6	0.09
015015	Almond	Newton Bridge	NN	888316	84.0	VA	1986–00	1777	1174	603	1479	90	892	87	3.13	0.27	08/95		.42	7.0	0.45
015013	Almond	Almondbank	NO	068258	174.8	VA	1955–00	1463	952	511	1522	61	489	73	5.28	0.37	08/84	119.5	.45	11.4	0.72
016002 *	Earn	Aberuchill	NN	754216	176.9	VA	1955–77	1699	1804		2406	61	1292	56	10.12	1.10	06/57	57.7	.46	24.2	1.26
016003	Ruchill Water	Cultybraggan	NN	764204	99.5	VA	1970–00	2057	1621	436	2087	82	1040	73	5.11	0.16	08/84	165.0	.30	12.8	0.35
016001	Earn	Kinkell Bridge	NN	933167	590.5	VA	1948–00	1528	1184	344	1628	48	696	55	22.17	1.09	08/55	193.5	.50	49.0	2.99
016007	Ruthven Water	Aberuthven	NN	975154	50.0	VA	1990–00	1399	880	519	**1106**	**00**	**722**	**96**	1.39	0.19	08/95		.52	3.1	0.25
016004	Earn	Forteviot Bridge	NO	044183	782.2	VA	1972–00	1494	1159	335	**1418**	**99**	625	73	28.74	2.46	08/84	250.5	.52	65.5	3.59
017015	North Queich	Lathro	NO	114042	23.1	VA	1987–00	1297	1009	288	1297	93	**784**	**96**	0.74	0.04	07/89		.43	1.7	0.08
017008	South Queich	Kinross	NO	122015	33.6	VA	1988..00	1281	958	323	1247	93	713	89	1.02	**0.09**	**09/96**		.43	2.3	0.12
017018	Greens Burn	Damleys Cottage	NO	157040	10.5	FV	1998–00	1194	598	596	631	00	553	99	0.20	0.05	08/99		.62	0.4	0.05
017016	Lochty Burn	Whinnyhall	NT	220985	14.0	FV	1986..00	933	493	440	642	87	**318**	**99**	0.22	**0.02**	**07/00**		.54	0.4	0.04
017004	Ore	Balfour Mains	NT	330997	162.0	VA	1972–00	899	412	487	**575**	**98**	110	73	2.12	0.16	08/75		.56	4.6	0.32
017002	Leven	Leven	NO	369006	424.0	VA	1969..00	954	480	474	691	85	169	73	6.46	0.79	10/72	29.2	.67	13.7	1.11
017001	Carron	Headswood	NS	832820	122.3	FV	1969..00	1606	892	714	1276	94	544	72	3.46	0.42	10/72	81.7	.35	8.5	0.56
017012	Red Burn	Castlecary	NS	788780	22.0	VA	1986..00	1258	988	270	1257	90	**767**	**96**	0.69	0.13	07/89		.34	1.6	0.12
017003	Bonny Water	Bonnybridge	NS	824804	50.5	VA	1971–00	1225	821	404	1135	90	**495**	**96**	1.31	0.21	08/83		.45	2.9	0.26
017005	Avon	Polmonthill	NS	952797	195.3	VA	1971..00	1034	658	376	**942**	**00**	333	73	4.07	0.54	08/75	59.2	.41	9.7	0.63
018023 *	Monachyle	Up' Monachyle	NN	480250	2.2	FV	1987..96	2645	2238	407	2717	94	1760	87	0.16	>0.00	08/95		.14	0.4	0.01
018017 *	Monachyle	Balquhidder	NN	475230	7.7	C	1982..96	2575	2109	466	2797	90	**1655**	**96**	0.51	0.01	06/82		.18	1.5	0.02
018018 *	Kirkton Burn	Balquhidder	NN	532219	6.8	C	1983–96	2351	1970	381	2343	90	1593	87	0.43	0.03	08/83		.39	1.0	0.05
018008	Leny	Anie	NN	585096	190.0	VA	1973–00	2382	2123	259	2669	86	1551	75	12.79	0.34	08/84	89.9	.37	32.2	0.83
018015	Eas Gobhain	Loch Venachar	NN	602070	202.0	TP	1986–99	2254	1131	1123	1512	94	742	87	7.25	2.61	08/95		.51	19.5	2.72
018003	Teith	Bridge of Teith	NN	725011	517.7	VA	1957..00	2053	1443	610	1993	90	919	69	23.69	3.14	08/84	183.2	.43	56.4	4.20
018019 *	Corner Burn	Corner	NN	387042	0.9	CB	1987–88	2746	2908		3399	88	2453	87	0.08	0.01	06/88		.16	0.2	>0.00
018020	Loch Ard Burn	Duchray	NS	468987	0.9	FLB	1990..00	2210	1744	466	2263	92	**1373**	**96**	0.05	>0.00	08/95		.20	0.1	>0.00
018021	Loch Ard Burn	Elrig	NS	469987	1.5	FLB	1990–00	2204	1631	573	**1957**	**98**	**1218**	**96**	0.08	>0.00	05/91		.17	0.2	>0.00
018022	Avon Dhu	Milton	NN	503014	44.5	VA	1990..99	2342	1938	404	2634	92	1535	95	2.73	0.26	05/91		.46	7.0	0.21
018016	Kelty Water	Clashmore	NS	468968	2.7	FL	1986..00	2249	1332	917	1740	86	1063	87	0.11	>0.00	05/91		.15	0.3	>0.00
018010	Forth	Gargunnock	NS	714953	397.0	VA	1986–00	1811	1228	583	**1428**	**98**	985	87	15.46	0.86	08/95		.33	41.7	1.06
018011	Forth	Craigforth	NS	775955	1036.0	VA	1981–00	1921	1486	435	1803	90	**1051**	**96**	48.83	3.57	08/84		.40	120.3	5.32
018001	Allan Water	Kinbuck	NN	792053	161.0	VA	1957–00	1378	1012	366	1295	94	674	75	5.16	0.53	07/84	65.6	.45	11.6	0.84
018005	Allan Water	Bridge of Allan	NS	786980	210.0	VA	1971–00	1359	1025	334	**1370**	**98**	641	75	6.82	0.65	08/84	96.4	.45	15.7	0.92
018014	Bannock Burn	Bannockburn	NS	812908	23.7	VA	1986–00	1485	1176	309	1473	90	**901**	**96**	0.88	**0.17**	**08/99**		.50	2.0	0.20
018007 *	Devon	Fossoway Bridge	NO	011018	69.5	VA	1986–91	1758	938	820	1117	90	738	87	2.07	0.41	07/89		.52	4.9	0.43

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
018002	Devon	Glenochil	NS 858960	181.0	VA	1959–00	1346	791	555	**1184**	**98**	425	73	4.54	0.75	10/72	40.8	.54	9.4	1.03
018013	Black Devon	Fauld Mill	NS 914924	56.2	CB	1986–00	1038	525	513	**691**	**98**	397	89	0.94	0.13	07/87		.40	2.1	0.17
019020	Almond	Whitburn	NS 948655	30.3	MIS	1986–00	1182	790	392	**1124**	**00**	**544**	**96**	0.76	**0.04**	**09/96**		.29	1.8	0.08
019002	Almond	Almond Weir	NT 004652	43.8	CB	1962–00	1091	685	406	**1009**	**00**	412	73	0.95	**0.10**	**09/96**	15.5	.33	2.3	0.14
019003 *	Breich Water	Breich Weir	NT 014639	51.8	B	1961–80	949	538	411	751	62	328	75	0.88	0.05	08/76	19.8	.31	2.1	0.09
019009	Bog Burn	Cobbinshaw	NT 026591	8.5	FL	1963..00	998	568	430	790	85	301	73	0.15	>0.00	09/92		.63	0.3	0.01
019005	Almond	Almondell	NT 086686	229.0	FV	1962–00	992	566	426	**898**	**00**	267	73	4.11	0.39	10/72	77.5	.35	9.6	0.56
019017	Gogar Burn	Turnhouse	NT 161733	38.8	MIS	1986..00	836	419	417	**600**	**98**	**266**	**96**	0.51	0.03	08/95		.40	1.1	0.05
019001	Almond	Craigiehall	NT 165752	369.0	VA	1957–00	919	513	406	**760**	**00**	247	73	6.00	0.67	10/72	120.2	.39	13.6	0.94
019012	Wtr of Leith	Colinton	NT 212688	72.0	FV	1986..00	1011	572	439	**782**	**00**	413	89	1.30	0.26	06/92		.53	2.7	0.32
019006	Wtr of Leith	Murrayfield	NT 228732	107.0	VA	1963–00	896	436	460	651	**00**	155	73	1.48	0.26	10/73	30.9	.49	3.0	0.35
019010	Braid Burn	Liberton	NT 273707	16.2	C+C	1969..00	791	333	458	**705**	**00**	113	73	0.17	**0.02**	**09/96**	0.8	.59	0.3	0.03
019004	North Esk	Dalmore Weir	NT 252616	81.6	MIS	1960–00	974	600	374	**866**	**00**	303	73	1.55	0.25	08/75	20.3	.54	3.3	0.35
019008 *	South Esk	Prestonholm	NT 325623	112.0	C	1964–89	861	377	484	576	85	114	73	1.34	0.28	09/73	18.9	.55	2.7	0.33
019021	South Esk	Cowbridge	NT 338678	156.0		1998–00	1017	477	540	529	**00**	406	99	2.36	0.62	08/99		.53	4.6	0.63
019011	North Esk	Dalkeith Palace	NT 333678	137.0	VA	1963..00	932	507	425	764	93	222	73	2.20	**0.47**	**09/96**	40.6	.53	4.3	0.56
019007	Esk	Musselburgh	NT 339723	330.0	VA	1962–00	862	404	458	**606**	**98**	156	73	4.23	0.84	08/95	69.7	.53	8.8	0.97
020002	W Peffer Brn	Luffness	NT 489811	26.2	MIS	1966–00	621	159	462	317	85	11	73	0.13	**>0.00**	**07/96**	3.5	.47	0.3	0.01
020004 *	E Peffer Brn	Lochhouses	NT 610824	31.1	MIS	1967..93	609	208	401	444	84	15	73	0.20	0.01	07/90	4.4	.37	0.4	0.01
020005	Birns Water	Saltoun Hall	NT 457688	93.0	VA	1965..00	752	324	428	**474**	**00**	98	73	0.95	0.13	09/73	22.0	.48	1.9	0.18
020003	Tyne	Spilmersford	NT 456689	161.0	VA	1965..00	736	273	463	**423**	**00**	72	73	1.39	0.20	08/76	31.2	.50	2.8	0.27
020007	Gifford Water	Lennoxlove	NT 511717	64.0	VA	1973–00	791	354	437	**600**	**00**	98	73	0.72	0.10	07/92	15.3	.57	1.4	0.15
020001	Tyne	East Linton	NT 591768	307.0	VA	1961..00	730	285	445	426	63	73	73	2.78	0.43	08/95	48.9	.53	5.5	0.56
020006 *	Biel Water	Belton House	NT 645768	51.8	VA	1973–98	757	340	417	451	83	96	73	0.56	0.12	08/95	14.7	.62	0.9	0.14
021001 *	Fruid Water	Fruid	NT 088205	23.7	TP	1959..68	1744	894	850	1066	63	770	66	0.67	0.10	06/61	19.1	.31	1.8	0.12
021028 *	Menzion Brn	Menzion Farm	NT 092234	5.7	TP	1948–52		1123		1278	50	874	52	0.20	0.03	07/49		.44	0.4	0.03
021014	Tweed	Kingledores	NT 109285	139.0	VA	1961–00n	1658	1234	424	1612	90	719	73	5.44	0.52	08/95		.45	9.3	0.91
021018	Lyne Water	Lyne Station	NT 209401	175.0	VA	1968–00n	978	585	393	**857**	**00**	288	73	3.25	0.50	08/95		.58	6.5	0.69
021005	Tweed	Lyne Ford	NT 206397	373.0	VA	1961–00n	1340	901	439	**1213**	**00**	509	73	10.66	1.26	08/95	124.3	.56	20.0	2.04
021019	Manor Water	Cademuir	NT 217369	61.6	VA	1968–00n	1449	848	601	**1126**	**00**	419	73	1.66	0.23	08/84	24.7	.58	3.5	0.30
021003	Tweed	Peebles	NT 257400	694.0	VA	1959–00n	1221	779	442	**1068**	**00**	405	73	17.14	2.17	08/95	175.4	.56	33.8	3.30
021030	Megget Water	Henderland	NT 231232	56.2	VA	1968–00n	1725	1318	407	1768	90	750	73	2.35	0.02	06/92	85.9	.45	4.3	0.32
021034	Yarrow Wtr	Craig Douglas	NT 288244	116.0	FL	1968–00n	1631	1178	453	1542	90	627	73	4.33	0.18	08/83	31.7	.49	8.6	0.71
021020	Yarrow Wtr	Gordon Arms	NT 309247	155.0	VA	1967–00n	1557	1134	423	1488	90	619	73	5.58	**0.22**	**08/96**	52.1	.48	11.4	0.86
021011	Yarrow Wtr	Philiphaugh	NT 439277	231.0	VA	1963–00n	1418	974	444	1263	90	507	73	7.14	0.45	08/83	82.5	.47	15.1	1.11
021017	Ettrick Water	Brockhoperig	NT 234132	37.5	VA	1965–00	1904	1591	313	2067	82	896	73	1.89	0.11	07/84	63.5	.34	4.4	0.19
021026	Tima Water	Deephope	NT 278138	31.0	VA	1973–00	1763	1382	381	1786	90	1008	76	1.36	0.04	07/84	52.8	.26	3.4	0.08
021007	Ettrick Water	Lindean	NT 486315	499.0	VA	1961–00n	1399	976	423	1235	82	507	73	15.44	0.93	07/89	232.9	.41	34.6	1.95
021006	Tweed	Boleside	NT 498334	1500.0	VA	1961–00n	1235	814	421	**1083**	**00**	422	73	38.71	3.83	08/84	399.6	.52	80.4	6.93
021013	Gala Water	Galashiels	NT 479374	207.0	VA	1964–00	961	556	405	751	**98**	238	73	3.65	0.29	08/95	50.6	.52	8.0	0.52
021015	Leader Water	Earlston	NT 565388	239.0	VA	1966–00	842	449	393	**626**	**00**	155	73	3.40	0.29	08/95	59.7	.50	7.4	0.45
021010 *	Tweed	Dryburgh	NT 588320	2080.0	VA	1960..80	1098	643	455	827	67	330	73	42.43	6.34	10/72	448.7	.51	92.4	8.08
021012	Teviot	Hawick	NT 522159	323.0	VA	1963–00	1216	854	362	1102	63	408	73	8.75	0.56	08/95	183.7	.43	19.9	1.01
021025	Ale Water	Ancrum	NT 634244	174.0	VA	1972–00n	966	505	461	**688**	**00**	203	73	2.79	0.06	08/95	42.6	.41	6.6	0.22
021024	Jed Water	Jedburgh	NT 655214	139.0	VA	1971–00	924	523	401	**697**	**00**	242	73	2.30	0.31	08/76	58.6	.41	5.2	0.40
021008	Teviot	Ormiston Mill	NT 702280	1110.0	VA	1960–00	986	565	421	739	63	250	73	19.87	1.92	08/95	342.6	.46	44.0	2.80
021021	Tweed	Sprouston	NT 752354	3330.0	VA	1969–00n	1052	633	419	**863**	**00**	306	73	66.89	6.34	08/95	738.8	.52	145.6	10.62
021023	Leet Water	Coldstream	NT 839396	113.0	VA	1970–00	659	237	422	**386**	**98**	32	73	0.85	0.01	08/95	48.4	.35	2.0	0.02
021009	Tweed	Norham	NT 898477	4390.0	VA	1962–00n	996	580	416	**770**	**00**	255	73	80.75	7.86	08/95	751.1	.53	169.7	14.25
021027	Blackadder	Mouth Bridge	NT 826530	159.0	VA	1973–00	762	343	419	**513**	**98**	134	89	1.73	0.16	08/95	38.6	.50	3.5	0.26
021002 *	Whiteadder	Hungry Snout	NT 663633	45.6	MIS	1959–68	969	694	275	1074	63	393	64	1.00	0.11	10/59	21.1	.51	2.0	0.15
021004 *	Watch Water	Watch Wtr Res	NT 664566	10.7	TP	1965–68	1031	383	648	395	67	206	66	0.13	0.03	01/66		.58	0.2	
021022	Whiteadder	Hutton Castle	NT 881550	503.0	CC	1969–00n	802	411	391	**604**	**98**	130	73	6.55	**0.78**	**09/96**	117.3	.53	13.1	1.11
021016	Eye Water	Eyemouth Mill	NT 942635	119.0	VA	1967–00	711	326	385	488	85	62	73	1.23	0.05	08/95	34.0	.45	2.7	0.13

Hydrometric Statistics

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
013009	**West Water at Dalhouse Bridge** C.A: 127.2 km^2	**85-95**	**1086**		**913**		**3.68**	**153.9**	**19/10 1988**	**0.52**	**21/08 1995**	**7.5**	**2.53**	**0.76**
M.A: SEPA-E	Local No: 50 Sens.: 12.3													
F.A.R: N	Level: 49m UE: FAI:													
Comment: Velocity-area station with cableway. 20m wide. Unstable gravel control which until 1990 was affected by abstraction of gravel by farmers. Flows are natural. Significant spring snowmelt is common. # No forestry. Rough grazing. Uplands are peaty and flat. Valley sides are steep.		1996	1173	108	997	109	4.01	53.6	08/01	0.61	19/08	8.7	2.47	0.68
		1997	1192	110	859	94	3.46	71.1	18/11	0.97	12/10	7.3	1.79	1.08
		1998	1379	127	1078	118	4.35	137.3	24/10	0.92	10/07	8.3	3.05	1.22
		1999	1159	107	870	95	3.51	**169.9**	**20/09**	0.70	03/09	7.1	2.23	0.83
		2000	1546	142	1214	133	4.88	149.5	20/09	0.85	27/07	10.1	3.08	0.96
013002	**Luther Water at Luther Bridge** C.A: 138.0 km^2	**82-95**	**897**		**495**		**2.17**	**72.4**	**01/12 1985**	**0.27**	**04/08 1982**	**4.4**	**1.43**	**0.38**
M.A: SEPA-E	Local No: 36 Sens.: 13.0													
F.A.R: N	Level: 25m UE: FAI:													
Comment: Velocity-area station with cableway. 10m wide. Situation not ideal due to bend u/s and island d/s, but stage-discharge relation is regularly reviewed using routine gaugings. Stable bedrock control at low flows. # Upper third of catchment is fairly steep (Grampian Mountains), the rest has moderate slopes. Lower 80% is on ORS, the rest is metamorphic. Land use: forest and rough grazing at higher levels; arable and cattle elsewhere.		1996	949	106	546	110	2.38	50.0	10/02	0.37	19/08	5.5	1.50	0.40
		1997	931	104	417	84	1.83	34.2	27/11	0.54	12/10	3.6	1.05	0.60
		1998	1133	126	655	132	2.87	43.1	04/04	0.65	09/07	4.9	2.15	0.87
		1999	916	102	454	92	1.99	39.6	24/12	0.46	15/09	3.6	1.56	0.53
		2000	1149	128	659	133	2.87	40.5	07/11	0.41	27/07	6.0	1.69	0.48

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
013007	**North Esk at Logie Mill** C.A: 732.0 km^2	**76-95**	**1111**		**813**		**18.86**	**462.1**	**10/11 1984**	**2.03**	**06/09 1976**	**38.8**	**12.30**	**3.05**
M.A: SEPA-E	Local No: 48 Sens.: 10.0													
F.A.R: SPI	Level: 11m UE: FAI:													
Comment: Compound Crump profile fibreglass weir, width 41m. Cableway - current meter calibration used. Daily flows of limited precision (based on single stage readings) from 1/76 to 4/83 derived from two nearby sites; high flows overestimated. Usually has significant spring snowmelt. Minor abstractions for PWS and irrigation. Naturalised monthly flows available 1976-87. # Drains south-east flank of Grampians. Steeply sloping apart from lower 30% which is mostly Old Red Sandstone, rest is igneous and metamorphic. Rough grazing on open moorland; cattle and arable at lower levels.		1996	1078	97	857	105	19.85	283.7	08/01	2.88	17/08	42.8	12.62	3.21
		1997	1122	101	767	94	17.80	369.1	18/11	4.05	02/11	37.6	8.42	4.36
		1998	1281	115	975	120	22.63	357.5	24/10	4.14	10/07	41.4	16.48	5.75
		1999	1073	97	743	91	17.24	442.7	20/09	3.32	24/08	30.8	11.37	3.74
		2000	1401	126	1077	132	24.93	385.8	20/09	3.20	27/07	55.0	15.37	3.86
013012	**South Esk at Gella Bridge** C.A: 130.0 km^2	**91-95**	**1449**		**1237**		**5.10**	**108.6**	**31/10 1991**	**0.52**	**18/08 1995**	**10.5**	**3.57**	**0.85**
M.A: SEPA-E	Local No: Sens.: 13.9													
F.A.R: N	Level: m UE: FAI:													
Comment: Velocity-area station located on straight reach between bridges. Bed and control are mixture of large boulders, sand and bedrock. Natural flows. Opened in 12/90 as part of South Esk Flood Warning Scheme. Usually experiences significant spring snowmelt. # Geology: predominantly Dalradian metamorphics. Long, narrow valley supporting rough grazing.		1996	1341	93	1279	103	5.26	68.6	09/01	0.58	18/08	12.6	3.54	0.70
		1997	1452	100	1314	106	5.42	93.4	20/11	0.96	09/08	12.1	2.71	1.22
		1998	1647	114	1464	118	6.04	50.6	04/04	1.48	09/07	12.4	4.39	1.83
		1999	1356	94	1247	101	5.14	76.1	20/09	0.93	04/09	8.8	3.74	1.11
		2000	1788	123	1715	139	7.05	64.2	20/09	1.11	07/08	15.7	4.46	1.41
013004	**Prosen Water at Prosen Bridge** C.A: 104.0 km^2	**85-95**	**1256**		**914**		**3.01**	**87.1**	**25/10 1988**	**0.43**	**18/08 1995**	**6.1**	**2.19**	**0.65**
M.A: SEPA-E	Local No: 37 Sens.: 13.1													
F.A.R: N	Level: 109m UE: FAI:													
Comment: Velocity-area station with cableway. 16m wide. Fairly stable rock and boulder control. Usually has significant spring snowmelt. # Metamorphic. Mostly rough grazing with about 20% forest cover.		1996	1197	95	984	108	3.24	61.2	08/01	0.50	18/08	7.0	2.04	0.55
		1997	1255	100	884	97	2.92	68.7	20/11	0.65	18/08	6.3	1.36	0.75
		1998	1437	114	1082	118	3.57	78.5	24/10	0.81	09/07	6.7	2.83	1.02
		1999	1191	95	854	93	2.82	65.5	20/09	0.56	03/09	5.3	2.06	0.65
		2000	1579	126	1234	135	4.06	78.2	20/09	0.64	07/08	8.2	3.00	0.76
013008	**South Esk at Brechin** C.A: 488.0 km^2	**83-95**	**1132**		**771**		**11.93**	**200.9**	**17/01 1993**	**1.21**	**26/08 1984**	**24.5**	**8.64**	**2.06**
M.A: SEPA-E	Local No: 47 Sens.: 9.4													
F.A.R: I	Level: 18m UE: FAI:													
Comment: Velocity-area station with cableway. 20m wide. High flows can cut off access to the cableway. Summer flows can be affected by agricultural abstractions. Supersedes 13003, Stannochy Bridge (1979-82), 3km u/s. Usually has significant spring snowmelt. # A long narrow catchment draining the SE flank of the Grampians. The upper 2/3 are steeply sloping. Land use: a mix of rough grazing on open moorland, forestry and, at lower levels, arable. The lower half lies on ORS, the rest is metamorphic.		1996	1073	95	801	104	12.36	122.2	08/01	1.51	19/08	27.3	8.07	1.70
		1997	1113	98	724	94	11.21	169.8	20/11	2.29	26/08	26.4	5.27	2.52
		1998	1303	115	927	120	14.34	153.2	04/04	2.74	10/07	27.8	10.93	3.68
		1999	1075	95	708	92	10.95	134.5	20/09	2.03	04/09	21.0	7.88	2.38
		2000	1435	127	997	129	15.39	124.5	09/10	2.24	27/07	30.6	10.95	2.89
013005	**Lunan Water at Kirkton Mill** C.A: 124.0 km^2	**81..95**	**780**		**405**		**1.59**	**32.4**	**26/09 1981**	**0.07**	**18/08 1995**	**3.6**	**0.88**	**0.17**
M.A: SEPA-E	Local No: 39 Sens.: 12.9													
F.A.R: I	Level: 9m UE: FAI:													
Comment: Velocity-area station with cableway. 6m wide. Control at low and medium flows is unstable gravel bed. # A moderately sloping catchment typically rising to 250m, divided in almost equal proportions between ORS and igneous rocks. Land use: pasture and arable.		1996	732	94	436	108	1.71	25.4	10/02	0.15	06/08	4.1	0.80	0.19
		1997	762	98	305	75	1.20	19.4	19/12	0.16	03/10	2.7	0.53	0.18
		1998	934	120	508	125	2.00	29.0	04/04	0.34?	07/07	3.6	1.38	0.45
		1999	735	94	305	75	1.20	29.4	24/12	0.17	09/08	2.6	0.73	0.22
		2000	973	125	539	133	2.11	35.7	**08/12**	0.10	06/08	5.0	1.01	0.19
013017	**Colliston Burn at Colliston** C.A: 8.4 km^2	**94-95**	**739**		**443**		**0.12**	**2.7**	**27/02 1994**	**>0.00**	**02/09 1994**	**0.3**	**0.04**	**>0.00**
M.A: SEPA-E	Local No: Sens.:													
F.A.R:	Level: m UE: FAI:													
Comment: Velocity area station installed in Oct 1993 as part of flood warning scheme for Arbroath. Tipping bucket raingauage installed at site in Oct 1994. # Geology: Old Red Sandstone - locally important aquifer, with Boulder Clay cover. Low lying catchment of subdued relief supporting agriculture. Entirely rural.		1996	719	97	440	99	0.12	2.6	10/02	>0.00	18/08	0.3	0.04	0.01
		1997	754	102	395	89	0.11	2.5	27/11	0.01	07/08	0.2	0.02	0.01
		1998	926	125	635	143	0.17	3.4	16/10	0.01	07/07	0.4	0.08	0.03
		1999	725	98	362	82	0.10	4.0	24/12	0.01	04/08	0.3	0.03	0.01
		2000	944	128	524	118	0.14	5.8	08/12	0.01	26/07	0.3	0.05	0.01
013010	**Brothock Water at Arbroath** C.A: 50.0 km^2	**89-95**	**655**		**299**		**0.47**	**14.4**	**07/10 1993**	**0.05**	**23/08 1995**	**1.0**	**0.24**	**0.08**
M.A: SEPA-E	Local No: Sens.:													
F.A.R: I	Level: m UE: FAI:													
Comment: Station opened as part of Arbroath flood warning scheme, launched winter 1993/94. Station is located on straight reach, immediately u/s of road bridge. Bed is a vegetated mix of sand and gravel, with high flows controlled by bridge. Debris thrown from bridge causes rating problems. # A gently-sloping, low-lying catchment, with fertile soils supporting a variety of crops and some forestry. Minor agricultural abstractions. Geology: mostly ORS with some lavas and tuffs.		1996	680	104	353	118	0.56	9.6	10/02	0.06	28/08	1.3	0.29	0.07
		1997	717	109	272	91	0.43	10.2	19/12	0.06	24/08	0.9	0.18	0.07
		1998	874	133	459	154	0.73	11.9	16/10	0.13	10/07	1.3	0.45	0.16
		1999	694	106	252	84	0.40	10.4	24/12	0.09	06/08	0.8	0.24	0.10
		2000	892	136	461	154	0.73	14.4	08/12	0.09	11/08	1.6	0.31	0.11
014007	**Craigmill Burn at Craigmill** C.A: 29.0 km^2	**87-95**	**783**		**332**		**0.31**	**12.2**	**31/03 1992**	**>0.00**	**18/08 1995**	**0.7**	**0.16**	**0.02**
M.A: SEPA-E	Local No: Sens.: 55.0													
F.A.R: SI	Level: 11m UE: FAI:													
Comment: Velocity-area station. 5m wide. No cableway. Calibrated to 0.7m (medium flow). Kerb weir control constructed Oct 1996 to attempt to make more sensitive at low flows. Previously unstable silt and gravel control. Fairly slow flows. Weed growth is a problem. Abstractions for irrigation. Recreational reservoirs (formerly PWS) affect flows when being cleaned out. # Low undulating catchment on ORS. Mainly used for arable farming.		1996	738	94	324	98	0.30	3.1	23/04	0.01	13/07	0.8	0.14	0.01
		1997	770	98	234	70	0.21	6.0	18/05	0.01?	25/04	0.4	0.09	0.03
		1998	975	125	509	153	0.47	6.4	03/04	0.03	11/07	1.0	0.29	0.08
		1999	729	93	251	76	0.23	5.1	24/12	0.01	16/08	0.5	0.14	0.02
		2000	968	124	411	124	0.38	8.5	08/12	>0.00	25/07	1.0	0.16	0.01
014002	**Dighty Water at Balmossie Mill** C.A: 126.9 km^2	**69..95**	**779**		**377**		**1.52**	**35.0**	**31/03 1992**	**0.10**	**17/08 1995**	**3.3**	**0.92**	**0.23**
M.A: SEPA-E	Local No: Sens.: 13.3 B/full: 55.0m^3s^{-1}													
F.A.R: SI	Level: 16m UE: FAI:													
Comment: Velocity-area station with cableway. 8m wide. Summer weed growth necessitates frequent revisions to the stage-discharge relation. Very flashy. # Gently sloping catchment except for the far N and W edges which drain S flank of Sidlaw Hills (up to 450m). The lower 10% is urban (Dundee), the rest mainly arable. Geology: predominantly Devonian S'st.		1996	734	94	388	103	1.56	15.0	07/01	0.19	19/09	3.7	0.97	0.21
		1997	744	96	286	76	1.15	15.9	18/12	0.28	02/10	2.4	0.69	0.30
		1998	997	128	510	135	2.05	21.7	04/04	0.36	11/07	3.6	1.61	0.52
		1999	748	96	294	78	1.18	19.6	24/12	0.21	04/09	2.6	0.81	0.25
		2000	922	118	493	131	1.98	21.9	06/11	0.21	11/08	4.5	1.17	0.28
014010	**Motray Water at Kilmany** C.A: 33.0 km^2	**91-95**	**747**		**291**		**0.31**	**11.8**	**31/03 1992**	**>0.00**	**08/08 1995**	**0.7**	**0.14**	**0.02**
M.A: SEPA-E	Local No: Sens.:													
F.A.R: I	Level: m UE: FAI:													
Comment: Station established to monitor spray irrigation abstractions in fertile area of NE Fife. Banks to 1.5m will contain all flows; cobble bed is rather uneven but stable. A wooden footbridge u/s allows measurement of high flows >2.1 m^3s^{-1}. Abstractions for irrigation are mainly at a single point and produce marked steps in the hydrograph. # Geology of intermediate/basic extrusives of Devonian/ORS age, with fertile soils supporting a variety of crops at lower levels.		1996	683	91	246	85	0.26	1.7	18/12	>0.00	09/08	0.7	0.17	0.01
		1997	709	95	227	78	0.24	2.3	20/12	0.03	08/08	0.6	0.11	0.04
		1998	893	120	396	136	0.41	5.7	05/04	0.06?	10/07	0.9	0.23	0.08
		1999	715	96	217	75	0.23	2.6	24/12	0.02	11/08	0.6	0.13	0.03
		2000	865	116	337	116	0.35	3.8	08/12	0.02	06/08	0.8	0.21	0.05
014005	**Motray Water at St Michaels** C.A: 60.0 km^2	**84-95**	**741**		**288**		**0.55**	**14.9**	**01/04 1992**	**0.05**	**29/06 1990**	**1.2**	**0.31**	**0.08**
M.A: SEPA-E	Local No: 3 Sens.: 18.7													
F.A.R: I	Level: m UE: FAI:													
Comment: Velocity-area station 4m wide. No cableway; gauged from bridge. Controls: kerbstones at low flow, channel at medium flow, bridge at high flow. Kerb weir rebuilt in Nov 1995, station recalibrated. Abstractions for irrigation. Also abstractions and discharges from sand and gravel workings though these have little net effect on daily means. # Geology: ORS and igneous. Low undulating hills to about 250m. Arable and rough grazing.		1996	660	89	226	78	0.43	2.7	18/12	**0.05**	**19/08**	1.0	0.31	0.06
		1997	684	92	212	74	0.40	4.5	20/12	0.09	09/08	0.9	0.22	0.10
		1998	868	117	360	125	0.69	10.4	05/04	0.15?	28/06	1.4	0.39	0.18
		1999	699	94	208	72	0.40	3.6	25/12	0.08	09/08	0.9	0.26	0.10
		2000	847	114	346	120	0.66	8.7	08/12	0.10	08/08	1.4	0.40	0.13

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
014009	**Eden at Strathmiglo** C.A: 26.0 km^2	91-95	1002		585		0.48	25.5	16/01	0.07	26/08	0.9	0.31	0.09
M.A: SEPA-E	Local No: Sens.:								1993		1995			
F.A.R: N	Level: 48m UE: FAI:													
Comment: Velocity-area station. All but highest flows contained; by-passing is very minor. Sand/cobble bed with grassy island providing control; growth of vegetation necessitates seasonal recalibration. Strathmiglo STW effluent (minor) bypasses station. Increasing spray irrigation d/s (but only minor above station). # Much of catchment is quite flat, with gentle hills rising to N and steeper Lomonds to S. Mixed geology of ORS and various igneous types. Arable agriculture at lower levels, and grazing (some improved land).		1996	895	89	482	82	0.40	12.4	28/10	0.07	19/09	0.8	0.28	0.08
		1997	958	96	489	84	0.40	9.7	20/02	0.07	31/10	0.8	0.26	0.09
		1998	1162	116	711	122	0.59	11.8	13/11	0.11	29/09	1.1	0.36	0.15
		1999	1061	106	618	106	0.51	12.4	28/02	0.10	23/08	1.1	0.31	0.12
		2000	1182	118	808	138	0.66	17.2	08/12	0.10	30/07	1.2	0.42	0.13
014001	**Eden at Kemback** C.A: 307.4 km^2	67..95	795		395		3.85	71.3	11/02	0.57	04/08	8.0	2.52	0.93
M.A: SEPA-E	Local No: Sens.: 8.4 B/full: 47.0m^3s^{-1}								1977		1989			
F.A.R: SGEI	Level: 6m UE: <.01 FAI: 0.989													
Comment: Velocity-area station with cableway. 15m wide. Abstractions for irrigation; gw abstractions and effluent returns. Summer weed growth necessitates frequent revisions to the stage-discharge relation. # A gently sloping basin lying between the Tay and Forth estuaries. Land use is mainly arable. Very mixed geology: Old Red Sandstone along the central valley; igneous to north; some igneous ptus Carboniferous Limestone and sandstone to the south.		1996	750	94	368	93	3.58	23.1	03/12	0.90	17/08	7.9	2.81	0.96
		1997	806	101	365	92	3.56	32.2	20/02	1.18	04/11	7.3	2.36	1.23
		1998	979	123	506	128	4.93	52.6	03/04	1.46	31/08	9.4	3.52	1.67
		1999	821	103	395	100	3.85	33.7	11/12	1.10	04/09	8.1	2.69	1.17
		2000	991	125	536	136	5.21	54.8	06/11	0.92	08/08	10.2	3.89	1.07
015024	**Dochart at Killin** C.A: 239.0 km^2	82-95	2817		2175		16.48	328.7	04/02	0.28	15/08	42.4	8.19	1.11
M.A: SEPA-E	Local No: 40 Sens.: 9.8								1990		1983			
F.A.R: I	Level: 130m UE: FAI:													
Comment: Velocity-area station with cableway. 35m wide. Stable bedrock control; sharp fall in bed level d/s of station, culminating in the Dochart Falls. Some exports to the Loch Lyon system for HEP. # A mountainous, mainly steeply sloping catchment. Land use: mainly rough grazing on open moorland with some forestry at the head of the catchment and along the valley bottom. Geology: predominantly metamorphic. Adjacent to the IH experimental Balquhidder catchments.		1996	2094	74	1573	72	11.89	132.0	03/11	0.59	20/09	31.6	5.50	1.02
		1997	2522	90	1876	86	14.22	218.4	01/03	0.97	04/06	40.8	6.38	1.43
		1998	2835	101	2196	101	16.64	258.0	11/02	0.81	05/06	41.3	10.14	1.34
		1999	3193	113	2460	113	18.64	211.6	22/12	0.93	10/08	47.0	10.67	1.87
		2000	2804	100	2306	106	17.43	184.9	05/01	0.60	25/07	48.9	7.96	1.28
015016	**Tay at Kenmore** C.A: 600.9 km^2	74-95	2252		2488		47.40	369.1	17/01	1.75	20/08	100.8	36.69	6.50
M.A: SEPA-E	Local No: Sens.: 6.4 B/full: 34.0m^3s^{-1}								1993		1984			
F.A.R: H	Level: 100m UE: <.01 FAI: 0.989													
Comment: Velocity-area station with cableway. 60m wide; no control on main channel. 120 sq.km controlled for HEP. Water imported from Lyon catchment - evident in water balance. Strong winds over Loch Tay (2km u/s) can affect flows. Daily gaugeboard readings 1959-74. Naturalised monthly flows available 1974-87. # The catchment is in the Grampians and is steeply sloping except for the valley bottom. Almost all metamorphic. Land use: rough grazing.		1996	1767	78	1842	74	35.01	184.4	06/11	2.90	24/09	73.2	29.25	5.02
		1997	2100	93	2161	87	41.18	239.6	02/03	5.78	26/07	83.1	27.13	8.43
		1998	2411	107	2593	104	49.41	199.5	12/02	5.01	05/06	102.0	40.81	7.73
		1999	2665	118	3013	121	57.41	227.8	24/12	8.66	12/08	111.6	46.13	12.11
		2000	2416	107	2915	117	55.40	209.3	07/01	3.66	28/07	140.4	42.51	7.75
015011	**Lyon at Comrie Bridge** C.A: 391.1 km^2	58-95	*1990*		976		12.10	377.9	04/02	1.70	02/09	27.0	7.15	2.97
M.A: SEPA-E	Local No: Sens.: 5.4 B/full: 370.0m^3s^{-1}								1990		1976			
F.A.R: H	Level: 92m UE: FAI:													
Comment: Velocity-area station with cableway. Originally hydro-board station, upgraded from pressure recorder (installed 1972, start of peak flows) to full network status in 1983. 40m wide. Banks 3.2m high contain all flows. Trees on banks hinder flood gauging. 170 sq.km controlled for HEP (major development 1951-59) storage in Lochs Lyon, An Daimh and Stronuich. Twice-daily ramp readings: 6/37 to 9/72. Naturalised monthly flows available from 1973-87. # Steeply sloping catchment (Grampian mountains). Land use: rough grazing and forestry. Geology: metamorphic (schist, quartzite and marble).		1996	1597	80	800	82	9.90	166.6	08/01	2.79	23/09	22.9	5.92	2.89
		1997	1959	98	899	92	11.15	239.6	17/02	2.76	19/08	23.6	5.73	2.93
		1998	2289	115	1045	107	12.96	156.0	11/02	2.94	09/07	26.9	8.46	3.45
		1999	2353	118	1158	119	14.36	235.3	22/12	2.55	23/08	30.1	8.87	3.03
		2000	2276	114	1144	117	14.15	220.5	05/01	2.88	22/07	34.0	7.86	3.31
015007	**Tay at Pitnacree** C.A: 1149.4 km^2	57..95	1936		1557		56.76	732.3	16/01	3.57	24/08	114.3	43.95	12.77
M.A: SEPA-E	Local No: Sens.: 4.4 B/full: 610.0m^3s^{-1}								1993		1984			
F.A.R: H	Level: 61m UE: <.01 FAI: 0.960													
Comment: Velocity-area station with cableway. 70m wide. Unstable gravel bed. 293 sq.km (25% of catchment) controlled for HEP but no further developmet post-1960. Naturalised monthly flows available from 1973 to 1987. # Most of the catchment is steep, comprising mountains and moorland. Land use: mainly rough grazing and forestry. Geology: almost entirely metamorphic.		1996	1609	83	1294	83	47.05	310.0	06/11	6.36	24/09	97.1	37.70	8.52
		1997	1926	99	1489	96	54.26	476.8	01/03	10.00	28/07	112.0	36.77	12.82
		1998	2219	115	1773	114	64.63	305.3	26/12	11.50	05/06	126.5	53.24	13.90
		1999	2385	123	2058	132	75.01	426.9	23/12	12.93?	12/08	144.5	59.29	16.51
		2000	2229	115	1955	126	71.04	398.6	05/01	7.30	28/07	164.2	53.58	12.72
015038	**Gaur at Bridge of Gaur** C.A: 247.0 km^2	92-95	2286		2086		16.34	373.7	16/01	0.31	30/08	34.9	9.49	1.23
M.A: SEPA-E	Local No: Sens.:								1993		1995			
F.A.R: S	Level: 205m UE: FAI:													
Comment: Flood warning station with cableway in Tummel headwaters. Stable section on gentle right-hand bend, with large boulders protruding from gravel bed. Large floods contained. Flow is dominated by discharge from Gaur Power Station immediately u/s, however, no imports or exports so runoff volumes unaffected by HEP. # Catchment covers Rannoch Moor (300m) and surrounding mountains (>1000m); 10% of catchment afforested. Geology mostly granitic.		1996	1623	71	1229	59	9.60	115.7	06/11	0.96	24/08	28.6	4.39	1.19
		1997	2108	92	1674	80	13.11	251.8	01/03	1.40	26/08	30.1	6.17	1.90
		1998	2442	107	1941	93	15.20	165.7	11/02	1.26	01/10	32.1	9.24	1.67
		1999	2325	102										
		2000	2233	98	1940	93	15.15	169.4	07/01	0.66	24/08	40.3	8.42	1.01
015039	**Tilt at Marble Lodge** C.A: 165.0 km^2	92-95	1421		1384		7.24	253.7	16/01	0.87	21/08	15.3	4.44	1.21
M.A: SEPA-E	Local No: Sens.: 10.8								1993		1995			
F.A.R: N	Level: 238m UE: FAI:													
Comment: Velocity area station, with cableway, in a straight reach, 17m wide. Separate low and high flow controls are shoals and rock steps, respectively. Steep rb extends up a hillside; lb contains gauge hut and access road. All flows contained. Natural catchment. Rainfall may be under-estimated. # Geology: Moinian and Dalradian Metamorphics. Land use: predominantly rough grazing.		1996	1079	76	1120	81	5.84	148.9	08/01	0.98	19/09	14.9	3.30	1.10
		1997	1275	90	1231	89	6.44	177.0	01/03	0.92	26/08	13.9	3.28	1.18
		1998	1444	102	1434	104	7.50	109.9	22/04	1.62	09/07	14.7	5.00	1.93
		1999	1493	105	1455	105	7.61	144.6	22/12	1.19	24/08	16.6	4.75	1.46
		2000	1510	106	1592	115	8.31	134.0	30/01	0.96	24/07	21.0	5.14	1.26
015012	**Tummel at Pitlochry** C.A: 1670.0 km^2	73-95	1568		1386		73.39	1049.0	16/01	12.68	02/09	145.0	55.14	18.98
M.A: SEPA-E	Local No: Sens.: 3.2								1993		1976			
F.A.R: H	Level: 74m UE: FAI:													
Comment: Original site 15804 Balinluig (1720 sq.km) moved 8km u/s to 15012 Port-na-craig (1649 sq.km) in 1978. Control scoured by Jan 1993 flood, low flow levels thence below inlet pipe. Data 9/9/93-11/4/95 est. from 15045. Superseded by Pitlochry 700 m d/s on 11/4/95. VA station, with cableway, below Faskally Dam. Used for flood warning. Entire catchment controlled for HEP; major storage in Lochs Ericht, Rannoch, Tummel and Faskally. Flows maintained above approx. 19 m^3s^{-1}. Naturalised monthly flows from 1973-87. # Most of catchment is steeply sloping (Grampians >1000m). Land use: mainly rough grazing and forestry. Geology: metamorphic.		1996	1184	76	1026	74	54.18	478.3	06/11	11.19	27/09	119.5	45.51	13.95
		1997	1514	97	1194	86	63.25	744.2	01/03	19.17	26/08	137.6	38.76	20.10
		1998	1715	109	1435	104	76.01	292.6	24/10	18.41	28/09	144.4	64.94	19.50
		1999	1748	111	1649	119	87.35	570.8	30/11	19.72	23/08	160.8	73.50	20.67
		2000	1722	110	1570	113	82.92	555.0	07/01	19.43	29/06	189.1	64.67	19.86
015023	**Braan at Hermitage** C.A: 210.0 km^2	83-95	1496		1059		7.05	244.2	29/03	0.18	28/08	16.6	4.00	0.52
M.A: SEPA-E	Local No: 46 Sens.: 12.9								1993		1984			
F.A.R: N	Level: 53m UE: FAI:													
Comment: Velocity-area station with cableway. 30m wide. The low flow control, a derelict stone weir, is sometimes altered by children. Supersedes Ballinloan (15017) 5km u/s (197 sq.km). Flows are natural. # Catchment is in the Grampians (> 800m) and has steep or moderate slopes. Mainly open moorland with rough grazing; forestry is being developed (25% in 1992). Geology: metamorphic with glacial Drift in lower catchment.		1996	1249	83	897	85	5.96	114.6	08/01	0.30	20/09	14.9	3.59	0.37
		1997	1366	91	955	90	6.36	181.0	19/02	0.58	09/08	15.7	2.68	0.79
		1998	1556	104	1097	104	7.31	96.6	24/10	0.73	11/07	15.4	4.82	1.24
		1999	1630	109	1157	109	7.71	146.6	20/09	0.53	05/09	17.4	3.91	0.74
		2000	1638	109	1175	111	7.80	150.2	19/09	0.48	27/07	17.4	5.10	0.69
015003	**Tay at Caputh** C.A: 3210.0 km^2	47..95	*1627*		1356		138.00	1873.0	17/01	8.07	12/08	271.2	106.70	35.89
M.A: SEPA-E	Local No: Sens.: 3.3								1993		1955			
F.A.R: SH	Level: 36m UE: <.01 FAI: 0.869													
Comment: Velocity-area station with cableway. 95m wide. 62% of catchment controlled for HEP; developed from 1930s to 1957. Substantial surface storage. Net water import. Twice daily stage readings from 7/37, continuous from 10/51. Monthly naturalised data available 1973-87. Estimated flood flow for 17/2/50 (1503 m^3s^{-1}) is to be revised. Recalibration underway, signif. changes to peak flows expected. # Most of catchment steep; mountains and moorland. Mainly rough grazing and forestry. Geology: mostly metamorphics and granites. Numerous lochs, largest are Ericht, Rannoch, Tummel and Tay.		1996	1322	81	1091	80	110.74	761.0	06/11	18.30	23/09	230.3	95.56	24.99
		1997	1619	100	1283	95	130.64	1238.0	01/03	30.58	29/07	268.2	86.56	33.63
		1998	1847	114	1556	115	158.36	604.5	03/01	33.79	10/07	300.0	131.21	38.66
		1999	1929	119	1765	130	179.69	977.2	23/12	36.23	12/08	343.7	144.38	40.82
		2000	1865	115	1723	127	174.87	926.9	05/01	29.16	28/07	392.7	138.90	35.57

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
015010	**Isla at Wester Cardean** C.A: 366.5 km^2	72-95	*1117*		646		7.51	158.7	17/01 1993	0.83	17/08 1995	15.8	4.94	1.49
M.A: SEPA-E Local No: Sens.: 8.2 B/full: 57.0m^3s^{-1}														
F.A.R: PI Level: 42m UE: <.01 FAI: 0.959														
Comment: Velocity-area station with cableway. 25m wide. Upgraded to full network status in 1984. Backing-up can effect the rating. Significantly influenced by Loch of Lintrathen and Blackwater Reservoirs (supply for Dundee). Appreciable net export. Naturalised monthly flows available from 1973 to 87. # Catchment lies on S edge of Grampians (> 1000m) and is mainly steeply sloping. Land use: rough grazing and forestry in uplands, cattle and arable in lowlands. Southern 35% is s'st, rest is metamorphic and igneous.		1996	1057	95	629	97	7.29	95.8	08/01	1.24	20/09	16.2	4.86	1.29
		1997	1104	99	573	89	6.66	104.1	20/11	1.55	19/08	15.3	3.32	1.74
		1998	1308	117	798	124	9.27	115.0	01/09	1.88	10/07	18.4	6.85	2.45
		1999	1123	101	618	96	7.19	116.0	20/09	1.51	04/09	14.2	4.98	1.86
		2000	1367	122	868	134	10.06	131.7	20/09	1.41	25/07	22.1	6.72	1.74
015008	**Dean Water at Cookston** C.A: 177.1 km^2	58..95	840		462		2.59	39.9	23/10 1960	0.38	05/08 1982	5.5	1.67	0.60
M.A: SEPA-E Local No: Sens.: 11.8 B/full: 52.0m^3s^{-1}														
F.A.R: EI Level: 45m UE: .01 FAI: 0.992														
Comment: Velocity-area station with cableway. 10m wide. Weed growth is a problem. The town of Forfar discharges treated effluent into Forfar Loch in the upper catchment; this is an import from the Isla. Naturalised monthly flows available 1973-87. # Gently sloping catchment except for S which drains N flank of Sidlaw Hills (350m). Land use: mainly arable. Predominantly rural, but urbanised (Forfar) around head of main channel. Geology: nearly all ORS.		1996	764	91	512	111	2.87	25.0	07/01	0.49	05/08	6.6	1.84	0.56
		1997	781	93	400	87	2.25	20.2	18/12	0.69	31/10	5.2	1.32	0.73
		1998	991	118	624	135	3.50	27.9	04/04	0.68	11/07	6.2	2.62	0.90
		1999	767	91	410	89	2.30	23.8	24/12	0.57	03/09	5.2	1.48	0.60
		2000	1009	120	643	139	3.60	25.4	08/12	0.49	22/07	8.2	2.18	0.60
015030	**Dean Water at Dean Bridge** C.A: 230.0 km^2	90-95	815		458		3.34	60.2	16/01 1993	0.39	12/08 1995	7.2	1.91	0.63
M.A: SEPA-E Local No: Sens.:														
F.A.R: Level: m UE: FAI:														
Comment: Velocity-area station 12m wide. Cableway. The town of Forfar discharges treated effluent into Forfar Loch in the upper catchment; this is an import from the Isla. # Geology: ORS. Gently sloping catchment except for the S which drains N flank of Sidlaw Hills (350m). Land use is mainly arable. Predominantly rural, but urbanised (Forfar) around head of the main channel.		1996	752	92	517	113	3.76	34.8	07/01	0.52	05/08	9.3	2.26	0.62
		1997	765	94	402	88	2.94	26.7	18/12	0.72	08/10	7.6	1.61	0.76
		1998	988	121	628	137	4.58	51.9	04/04	0.83	11/07	8.6	3.20	1.11
		1999	785	96	416	91	3.03	37.7	24/12	0.63	11/08	7.3	1.85	0.68
		2000	989	121	647	141	4.70	33.5	08/12	0.58	22/07	11.2	2.75	0.77
015014	**Ardle at Kindrogan** C.A: 103.0 km^2	85-95	1303		988		3.23	87.5	19/10 1988	0.19	04/08 1989	7.4	1.94	0.43
M.A: SEPA-E Local No: 29 Sens.: 8.4														
F.A.R: N Level: 248m UE: FAI:														
Comment: Velocity-area station. 14m wide. Gauged from bridge; cableway planned. Boulder and gravel control. Natural flows. # Mountainous catchment on metamorphic rock with some l'st outcrops. Steep slopes. Mainly rough grazing. Increasing forestry (10% of catchment in 1992).		1996	1037	80	924	94	3.01	63.3	08/01	0.33	19/09	8.0	1.81	0.35
		1997	1172	90	939	95	3.07	65.5	01/03	0.39	26/08	6.9	1.35	0.54
		1998	1309	100	1073	109	3.51	51.5	01/09	0.49	07/07	7.4	2.28	0.61
		1999	1316	101	1120	113	3.66	70.2	20/09	0.49	24/08	7.9	2.21	0.56
		2000	1384	106	1251	127	4.08	90.4	20/09	0.32	24/07	9.4	2.63	0.44
015025	**Ericht at Craighall** C.A: 432.0 km^2	85-95	1258		948		12.99	381.0	16/01 1993	0.96	17/08 1995	28.5	8.61	1.87
M.A: SEPA-E Local No: 49 Sens.: 9.1														
F.A.R: N Level: 76m UE: FAI:														
Comment: Velocity-area station with cableway. 46m wide. Stable bedrock control. Flows are natural. # Mountainous steeply sloping catchment on metamorphic rock. Used mainly for rough grazing with a small amount of forestry.		1996	1049	83	864	91	11.81	190.0	08/01	1.11	20/09	27.5	7.86	1.41
		1997	1160	92	840	89	11.51	185.9	20/11	1.65	26/08	27.0	5.01	2.13
		1998	1313	104	999	105	13.69	142.4	01/09	2.02	10/07	29.2	9.86	3.04
		1999	1259	100	990	104	13.56	227.7	20/09	1.76	04/09	26.6	9.49	2.26
		2000	1361	108	1136	120	15.52	253.1	20/09	1.60	25/07	33.5	11.24	2.14
015021	**Lunan Burn at Mill Bank** C.A: 94.0 km^2	84-95	937		503		1.50	16.8	17/01 1993	0.05	16/08 1995	3.4	1.06	0.14
M.A: SEPA-E Local No: 19 Sens.: 14.0														
F.A.R: IN Level: m UE: FAI:														
Comment: Velocity-area station. 7.5m wide. No cableway. Stable cobbled bed control (old ford) under a bridge; bridge is high flow control. Not gauged at very high flows, HIF record patchy. Minor abstractions for irrigation. # Undulating hilly catchment to about 400m. Mixed arable farming and rough grazing with some natural woodlands. Five small natural lochs in the catchment.		1996	842	90	476	95	1.41	8.3	09/01	0.08	24/09	3.1	1.18	0.11
		1997	881	94	417	83	1.24	8.4	02/03	0.19	07/08	3.4	0.67	0.23
		1998	1082	115	624	124	1.86	10.9	25/10	0.39	11/07	3.6	1.39	0.49
		1999	967	103										
		2000	1080	115	574	114	1.71	9.7	09/12	0.16	30/07	3.7	1.26	0.24
015006	**Tay at Ballathie** C.A: 4587.1 km^2	52..95	1455		1136		165.20	2268.0	17/01 1993	11.46	06/08 1955	327.4	130.00	43.00
M.A: SEPA-E Local No: Sens.: 1.8 B/full: 620.0m^3s^{-1}														
F.A.R: SPIH Level: 26m UE: <.01 FAI: 0.890														
Comment: Velocity-area station with cableway. 90m wide. The most d/s station on the Tay, records highest mean flow in UK. Since end of 1957, 1980 sq.km (43%) controlled for HEP; there was some control prior to this. 73 sq.km controlled for water supply. # Catchment is mostly steep, comprising mountains and moorland; exceptions are lower valleys. Mainly rough grazing and forestry. Geology: mainly metamorphics and granite, but lower 20% (Isla Valley) is Old Red Sandstone.		1996	1207	83	990	87	143.58	874.1	06/11	23.07	23/09	297.2	119.98	30.58
		1997	1431	98	1093	96	158.95	1363.0	01/03	38.66	19/08	343.7	102.04	41.40
		1998	1651	113	1339	118	194.72	742.0	24/10	40.46	10/07	363.6	161.49	47.23
		1999	1667	115	1451	128	210.99	1106.0	24/12	43.04	12/08	401.9	172.16	46.85
		2000	1669	115	1472	130	213.54	1022.0	05/01	35.84	25/07	474.7	172.24	42.65
015027	**Garry Burn at Loakmill** C.A: 20.0 km^2	87-95	1018		631		0.40	18.8	16/01 1993	0.01	16/08 1995	0.9	0.22	0.04
M.A: SEPA-E Local No: Sens.: 35.3														
F.A.R: I Level: m UE: FAI:														
Comment: Velocity-area station. 4m wide. No cableway; high flows gauged from bridge. Low flow control formed from sleepers in a Flat V configuration; bridge is high flow control. Fully gauged. Significant abstractions for irrigation. # Moderately sloping catchment rising to 400m. Geology: metamorphic and ORS. Land is used for mixed farming.		1996	954	94	545	86	0.34	3.9	28/10	0.01	13/09	0.9	0.23	0.02
		1997	989	97	593	94	0.38	9.8	19/02	0.03	26/08	0.9	0.19	0.04
		1998	1170	115	844	134	0.53	7.4	24/10	0.06?	10/07	1.1	0.36	0.09
		1999	1071	105	632	100	0.40	10.4	24/12	0.03	03/09	0.9	0.21	0.04
		2000	1171	115	706	112	0.45	4.5	08/12	0.03	27/07	1.0	0.29	0.04
015028	**Ordie Burn at Luncarty** C.A: 54.0 km^2	88-95	1027		638		1.09	53.5	16/01 1993	0.03	16/07 1989	2.5	0.60	0.09
M.A: SEPA-E Local No: Sens.: 10.7														
F.A.R: I Level: m UE: FAI:														
Comment: Velocity-area station with cableway. 7m wide. Fully rated. Old mill weir 1.5m high provides a stable control at all flows; the weir offtake has been closed off. # Moderately sloping catchment rising to 400m. Geology: metamorphic and ORS. Land is used for mixed farming.		1996	937	91	579	91	0.99	16.6	28/10	0.03	19/09	2.5	0.61	0.05
		1997	964	94	637	100	1.09	29.8	19/02	0.09	25/08	2.6	0.55	0.14
		1998	1152	112	853	134	1.46	22.6	13/11	0.13	11/07	3.0	0.92	0.21
		1999	1065	104	689	108	1.18	38.1	24/12	0.08	24/08	2.7	0.63	0.12
		2000	1159	113	805	126	1.37	17.2	08/12	0.08	21/07	3.1	0.94	0.11
015015	**Almond at Newton Bridge** C.A: 84.0 km^2	86-95	1757		1195		3.18	134.5	18/10 1988	0.21	23/08 1995	7.0	1.82	0.45
M.A: SEPA-E Local No: 22 Sens.: 12.3														
F.A.R: I Level: 211m UE: FAI:														
Comment: Velocity-area station with cableway. 15m wide. Stable control of gravel and small stones. 30 sq.km controlled for HEP otherwise natural regime - very flashy. # Steep mountainous catchment on metamorphic rock. Rough grazing with hardly any forestry.		1996	1540	88	985	82	2.62	68.7	08/01	0.28	20/09	6.1	1.63	0.31
		1997	1597	91	992	83	2.64	91.5	19/02	0.37	18/08	5.3	1.39	0.50
		1998	1898	108	1156	97	3.08	53.1	24/10	0.55	11/07	6.2	2.03	0.64
		1999	2020	115	1281	107	3.41	155.1	20/09	0.42	24/08	8.1	1.89	0.51
		2000	2012	115	1260	105	3.35	101.0	05/01	0.40	27/07	7.8	2.11	0.51
015013	**Almond at Almondbank** C.A: 174.8 km^2	55-95	*1452*		948		5.25	233.2	16/01 1993	0.14	01/08 1955	11.6	3.18	0.71
M.A: SEPA-E Local No: Sens.: 10.9 B/full: 195.0m^3s^{-1}														
F.A.R: PH Level: 20m UE: <.01 FAI: 0.996														
Comment: Velocity-area station with cableway. 15m wide. Daily read gaugeboard from 1/55 to 1/73. Very flashy. Lowest Tay tributary above tidal limit. 30 sq.km controlled for HEP. Minor abstraction from Fendoch Burn for water supply. Naturalised monthly flows available from 1973. # Long narrow catchment draining Glen Almond in SE of Grampians (>900m). Upper 2/3 is steeply sloping. Rough grazing in upper parts, some cattle in the lower. 2/3 is metamorphic; rest is s'st.		1996	1328	91	827	87	4.57	83.4	26/10	0.41	20/09	10.8	3.04	0.49
		1997	1358	94	890	94	4.93	130.6	19/02	0.80	09/08	10.2	2.77	0.99
		1998	1643	113	1055	111	5.85	91.1	01/09	0.93	10/07	12.4	3.99	1.13
		1999	1682	116	1065	112	5.90	225.3	20/09	0.79	24/08	12.2	3.56	0.94
		2000	1710	118	1091	115	6.03	112.1	05/01	0.71	25/07	13.0	3.99	0.94

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
016003	**Ruchill Water at Cultybraggan** C.A: 99.5 km^2	**70..95**	**2048**		**1596**		**5.04**	**250.4**	**13/01 1975**	**0.09**	**28/08 1984**	**12.7**	**2.34**	**0.34**
M.A: SEPA-E	Local No: Sens.: 15.2 B/full: 159.4m^3s^{-1}													
F.A.R: N	Level: 62m UE: <.01 FAI: 1.000													
Comment: Velocity-area station with cableway. 20m wide. Flashiness and remoteness hinder flood gauging. Flows are natural. # A mountainous catchment with steep slopes. Land is used mainly for rough grazing and army ranges. Thick peat on the flatter hill tops. Main channel follows a major geological fault: sandstone (40%) to its south, metamorphic (60%) to its north.		1996	1763	86	1486	93	4.68	144.8	11/03	0.22	20/09	12.8	2.29	0.24
		1997	1989	97	1566	98	4.94	229.4	19/02	0.38	18/08	11.7	2.07	0.46
		1998	2284	112	1898	119	5.99	163.9	20/10	0.52	05/06	12.7	3.37	0.69
		1999	2343	114	1927	121	6.08	169.3	28/11	0.38	24/08	15.7	2.86	0.62
		2000	2176	106	1858	116	5.85	114.0	05/01	0.36	27/07	15.9	2.93	0.56
016001	**Earn at Kinkell Bridge** C.A: 590.5 km^2	**48-95**	*1517*		**1169**		**21.89**	**357.7**	**16/01 1993**	**0.72**	**06/08 1955**	**48.4**	**14.86**	**2.93**
M.A: SEPA-E	Local No: Sens.: 7.6 B/full: 147.7m^3s^{-1}													
F.A.R: PH	Level: 15m UE: <.01 FAI: 0.952													
Comment: Velocity-area station with cableway. 35m wide. An allowance is made for any high flows which bypass gauged section. Weed growth can be a problem. 189 sq km controlled for HEP. Loch Turret used for PWS. Monthly naturalised flows available 1963-87. # Drains S Grampians. Steep slopes plus extensive flatter areas in lower parts. Mixed agricultural use in E; forestry and rough grazing in W. Metamorphic in W; s'st elsewhere with Drift in valley. Roughly 50% pervious.		1996	1392	92	1133	97	21.16	152.9	28/10	2.52	12/09	48.6	15.54	3.01
		1997	1519	100	1146	98	21.45	257.9	19/02	2.98	19/08	50.9	11.75	3.38
		1998	1757	116	1394	119	26.10	240.9	20/10	3.39	04/06	51.8	21.76	4.07
		1999	1831	121	1506	129	28.20	230.4	28/11	3.02?	24/08	58.1	19.64	3.97
		2000	1757	116	1461	125	27.27	211.9	05/01	3.17	25/07	58.6	20.45	3.74
016007	**Ruthven Water at Aberuthven** C.A: 50.0 km^2	**90-95**	**1387**		**858**		**1.36**	**46.5**	**14/01 1993**	**0.11**	**26/08 1991**	**3.0**	**0.77**	**0.23**
M.A: SEPA-E	Local No: Sens.: 15.9													
F.A.R: E	Level: 25m UE: FAI:													
Comment: Velocity-area station, 9m wide, with cableway. Water imported through STW at Gleneagles and Auchterarder. Large floods bypass the station. # Geology: Lower ORS. Drains N side of the Ochil Hills. Land use: mixed grazing and arable.		1996	1166	84	724	84	1.14	16.9	28/10	0.18	17/09	2.6	0.77	0.20
		1997	1255	90	753	88	1.19	30.4	19/02	0.24	26/08	2.7	0.62	0.27
		1998	1606	116	987	115	1.56	25.9	24/10	0.33	30/08	3.1	1.07	0.39
		1999	1522	110	960	112	1.52	34.5	24/12	0.25	03/09	3.5	0.87	0.28
		2000	1530	110	1109	129	1.75	27.4	26/04	0.27	25/07	3.7	1.23	0.32
016004	**Earn at Forteviot Bridge** C.A: 782.2 km^2	**72..95**	**1482**		**1140**		**28.27**	**415.0**	**16/01 1993**	**2.12**	**26/07 1984**	**64.9**	**18.29**	**3.45**
M.A: SEPA-E	Local No: Sens.: 6.1 B/full: 130.0m^3s^{-1}													
F.A.R: PH	Level: 8m UE: <.01 FAI: 0.961													
Comment: Velocity-area station. 50m wide. Rebuilt with cableway in 1991. Bridge forms control. Cableway too close to bridge. Big floods (>70 year RP) bypass station. 189 sq.km controlled for HEP. Loch Turret used for PWS. Naturalised monthly flows available from 1975 to 1987. # Drains southern Grampians. Metamorphics dominant in west, sandstones in the east; substantial Drift in the valley. Steep slopes plus extensive flatter areas in lower catchment. Mixed agricultural use in lowland east; forestry and rough grazing in west.		1996	1300	88	1034	91	25.58	196.6	28/10	3.08	13/09	59.0	18.70	3.88
		1997	1420	96	1075	94	26.68	308.7	02/03	4.24	19/08	62.2	14.10	4.75
		1998	1665	112	1345	118	33.37	253.4	21/10	5.04	08/07	67.9	25.61	5.92
		1999	1707	115	1418	124	35.17	274.2	24/12	3.87	24/08	78.3	23.71	4.90
		2000	1650	111	1371	120	33.90	234.1	05/01	3.79	25/07	76.9	25.13	4.56
017015	**North Queich at Lathro** C.A: 23.1 km^2	**87-95**	**1263**		**1027**		**0.75**	**35.0**	**16/01 1993**	**0.03**	**24/07 1989**	**1.8**	**0.38**	**0.07**
M.A: SEPA-E	Local No: 61 Sens.:													
F.A.R: N	Level: 114m UE: FAI:													
Comment: Velocity-area station. Fairly stable control dominated by sharp bend d/s of station. Not gauged accurately at high flows. Installed to assess inflows to Loch Leven. Flows are natural. # A mainly arable catchment with some sheep farming on the higher ground.		1996	1115	88	786	77	0.57	15.3	28/10	0.05	04/08	1.3	0.32	0.05
		1997	1202	95	*921*	90	0.67					1.2	0.34	0.15
		1998	1563	124	1182	115	0.87	6.0d	25/10	0.13	20/06	1.7	0.55	0.17
		1999	1417	112	1021	99	0.75	7.1d	28/02	0.08	03/09	1.8	0.44	0.09
		2000	1511	120	1198	117	0.87	6.9d	26/04	0.09	22/07	1.9	0.52	0.11
017008	**South Queich at Kinross** C.A: 33.6 km^2	**88-95**	**1249**		**948**		**1.01**	**126.8**	**16/01 1993**	**0.09**	**09/08 1989**	**2.1**	**0.51**	**0.12**
M.A: SEPA-E	Local No: 64 Sens.: B/full: 104.9m^3s^{-1}													
F.A.R: N	Level: 108m UE: FAI:													
Comment: Velocity-area station with stable control. U/s of road bridge. All recorded flows contained. Not rated at high flow (typical high flows probably accurate to within 20%). Natural flows (apart from effect of agricultural drainage); previously contained sand and gravel workings though these had a minor influence. # Rural catchment.		1996	1078	86										
		1997	1175	94	818	86	0.87	20.0	20/02	0.15	26/08	1.9	0.41	0.17
		1998	1525	122										
		1999	1414	113	1106	117	1.18	17.5d	28/02	0.12	15/09	2.9	0.61	0.15
		2000	1479	118	1079	114	1.15	9.7d	26/04	0.11	30/07	2.5	0.65	0.13
017018	**Greens Burn at Damleys Cottage** C.A: 10.5 km^2													
M.A: SEPA-E	Local No: Sens.:													
F.A.R:	Level: m UE: FAI:													
Comment: Flat V weir. Upstream of large capacity culvert - allows weir to operate as control to high level. Responsive regime. Research site - station monitors runoff into Loch Leven (objective is to assess phosphorus and other nutrient loadings). # Relatively flat, intensively farmed catchment below headwaters in the Lomond Hills.		1996													
		1997												
		1998	1212		605		0.20	1.7d	03/04	0.06	26/09	0.4	0.15	0.07
		1999	1119		553		0.18	1.6d	28/02	0.04	10/08	0.4	0.14	0.04
		2000	1251		633		0.21	1.7d	08/12	0.02	20/07	0.4	0.16	0.05
017016	**Lochty Burn at Whinnyhall** C.A: 14.0 km^2	**86..95**	**909**		**536**		**0.24**	**9.5**	**23/01 1993**	**0.01**	**27/07 1994**	**0.4**	**0.17**	**0.08**
M.A: SEPA-E	Local No: 54 Sens.:													
F.A.R: GI	Level: 76m UE: FAI:													
Comment: Concrete Flat V weir situated under a bridge which will contain all flows. Until 1991 the control was a gabion weir 5m d/s of the bridge. The site is immediately d/s of the large Westfield opencast coal mine; this has a significant influence on flows, particularly as a result of gw issuing from breached faults. # Catchment is dominated by opencast coal mine u/s of the station.		1996	778	86	388	72	0.17	3.0	03/12	0.01	02/10	0.3	0.13	0.05
		1997	888	98	399	74	0.18	7.9	20/02	0.02	08/08	0.3	0.12	0.06
		1998	1098	121										
		1999	982	108	318	59	0.14	1.9d	28/02	0.01	03/09	0.3	0.08	0.02
		2000	1147	126	445	83	0.20	4.1d	06/11	0.01	29/07	0.4	0.12	0.01
017004	**Ore at Balfour Mains** C.A: 162.0 km^2	**72..95**	**883**		**404**		**2.08**	**52.8**	**10/02 1977**	**0.09**	**21/08 1973**	**4.5**	**1.36**	**0.28**
M.A: SEPA-E	Local No: 42 Sens.: B/full: 26.3m^3s^{-1}													
F.A.R: EI	Level: 23m UE: FAI:													
Comment: Open river section with stable rock bar low flow control, has shown instability at rb. A railway embankment forms the rb, whilst the lb is steep to the floodplain at 1.6m. Low flows moderately affected by pumping from collieries. May 1994 flows affected by work at the Loch Fitty outlet. # The catchment is in the coal mining area of W Fife and is composed of Carboniferous rocks. Land use: arable farming.		1996	771	87	320	79	1.64	17.1	03/12	0.29	02/10	3.4	1.10	0.35
		1997	891	101	379	94	1.95	22.4	20/02	0.44	03/10	4.2	1.25	0.52
		1998	1107	125	575	142	2.95	22.0d	03/04	0.77	30/08	5.6	2.27	0.98
		1999	975	110	423	105	2.18	13.3d	03/12	0.41	22/08	4.5	1.44	0.55
		2000	1132	128	543	134	2.78	20.0d	07/11	0.44	30/07	5.6	2.04	0.52
017002	**Leven at Leven** C.A: 424.0 km^2	**69..95**	**936**		**476**		**6.39**	**128.0**	**10/02 1977**	**0.40**	**27/07 1974**	**13.7**	**4.53**	**1.09**
M.A: SEPA-E	Local No: 41 Sens.: 8.3 B/full: 660.0m^3s^{-1}													
F.A.R: SREI	Level: 9m UE: .02 FAI: 0.832													
Comment: River section in a straight reach with artificially heightened and steeped banks. The control was formerly a gravel bar, now stabilised with gabions to form an irregular broad-crested weir. Possible movement in control, evident at low flows. There are a number of small storage reservoirs in the catchment plus Loch Leven whose outflow is controlled by sluice gates (these can produce seemingly anomalous flow hydrographs). # Geology: predominantly Carboniferous rocks. Land use: lowland arable farming.		1996	861	92	367	77	4.92	25.1	03/12	0.78	13/09	10.1	3.42	0.87
		1997	966	103										
		1998	1200	128	576	121	7.74	33.8	03/04	2.45	30/08	13.4	7.01	3.27
		1999	1073	115	483	101	6.49	24.4d	05/01	1.09	23/08	14.0	5.19	1.40
		2000	1213	130	649	136	8.70	44.8d	07/11	1.16	19/07	16.3	7.99	1.45
017001	**Carron at Headswood** C.A: 122.3 km^2	**69..95**	**1589**		**873**		**3.38**	**179.7**	**11/12 1994**	**0.18**	**01/09 1988**	**8.4**	**1.48**	**0.55**
M.A: SEPA-E	Local No: 32 Sens.: 22.5 B/full: 150.0m^3s^{-1}													
F.A.R: SE	Level: 18m UE: <.01 FAI: 0.848													
Comment: Flat V weir installed in Oct 1988 in an artificial meander cutoff. Previously velocity-area station: instability in rating caused by d/s deposition. Straight, uniform channel (concrete walls) lined with gabions; banks are steep to 2.5m. Catchment contains Carron Valley Res. - export of water and operation can significantly influence flow patterns. # The upper part of the catchment drains part of the Campsie Fells. Geology: composed of igneous rocks in headwaters and Carboniferous rocks in the valley.		1996	1373	86	693	79	2.68	95.7	28/10	0.44	07/08	6.5	1.17	0.56
		1997	1476	93										
		1998	2000	126	1270	145	4.93	131.1	20/10	0.57	11/07	11.4	2.54	0.97
		1999	1822	115	1088	125	4.22	33.3d	24/12	0.55	15/07	10.6	2.10	0.81
		2000	1811	114	1108	127	4.29	65.3d	01/02	0.49	04/07	10.7	1.73	0.63

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
017012 Red Burn at Castlecary C.A: 22.0 km^2	86..95	1248		999		0.70	46.8	06/10 1990	0.09	04/09 1993	1.5	0.34	0.12
M.A: SEPA-E Local No: 46 Sens.: B/full: 37.1m^3s^{-1}													
F.A.R: E Level: 45m UE: FAI:													
Comment: Velocity-area station. Low flow control is a gravel bar 20m d/s. Large boulders probably form high flow control. The section will probably contain all flows. At 95 percentile flow STW discharges account for half of the flow. # A gently sloping catchment rising to 185m. Geology: entirely Carboniferous with much Boulder Clay cover. Land use: mixed agriculture except for the 16% covered by Cumbernauld New Town. There are two small lochs in southern headwaters.	1996	972	78	769	77	0.54	20.1	28/10	0.10	03/10	1.2	0.28	0.11
	1997	1117	90										
	1998	1555	125	1227	123	0.86	7.5d	22/10	0.11	07/07	2.0	0.52	0.14
	1999	1335	107	941	94	0.66	6.8d	30/11	0.09	24/08	1.6	0.31	0.10
	2000	1430	115	1055	106	0.73	7.7d	26/04	0.10	05/07	1.6	0.39	0.11
017003 Bonny Water at Bonnybridge C.A: 50.5 km^2	71..95	1218		829		1.33	51.5	06/10 1990	0.09	01/07 1992	2.9	0.75	0.26
M.A: SEPA-E Local No: 31 Sens.: B/full: 18.0m^3s^{-1}													
F.A.R: EI Level: 23m UE: FAI:													
Comment: Open river section with rock bar low flow control. Possible shift in control. Floodplain at 2.1m on lb. Severe congestion by aquatic weeds in summer necessitates large correction to recorded stage. Low flows affected by effluent discharge. # Catchment composed of Carboniferous rocks with igneous intrusions. Land use: predominantly rural with urban development at Cumbernauld in the headwaters.	1996	951	78	496	60	0.79	18.4	28/10	0.17	03/09	1.6	0.51	0.21
	1997	1115	92	588	71	0.94	17.2	20/02	0.24	03/10	1.8	0.59	0.28
	1998	1524	125	1079	130	1.73	13.9d	22/10	0.39	24/05	3.7	1.14	0.48
	1999	1335	110	904	109	1.45	12.8d	30/11	0.40	15/09	3.2	0.82	0.46
	2000	1404	115	849	102	1.36	9.2d	31/01	0.33	22/07	2.8	0.84	0.39
017005 Avon at Polmonthill C.A: 195.3 km^2	71..95	1021		643		3.98	132.9	06/10 1990	0.44	26/07 1984	9.4	1.96	0.61
M.A: SEPA-E Local No: 30 Sens.: B/full: 138.7m^3s^{-1}													
F.A.R: EI Level: 4m UE: .02 FAI: 0.979													
Comment: Velocity-area station; the river takes a sharp left turn u/s at a site of river capture. Unstable gravel control replaced by gabion weir in 1990. There is a small island in mid-channel immediately below the station which forms the high flow control. The banks have contained all recorded flows. Low flows are moderately affected by effluent discharges. Extensive moorland drainage schemes in headwaters. # Geology: Carboniferous sedimentaries. The catchment is predominantly rural with a few small former coal-mining towns.	1996	844	83	511	79	3.16	44.8	28/10	0.60	03/09	7.5	1.76	0.65
	1997	958	94	538	84	3.33	52.5	11/12	0.94	02/10	7.2	1.82	1.00
	1998	1304	128	900	140	5.57	34.1d	11/02	1.17	26/05	12.8	3.50	1.38
	1999	1137	111	768	119	4.75	49.1d	28/11	0.98	15/09	11.0	2.13	1.06
	2000	1272	125	944	147	5.83	60.0d	26/04	0.81	26/07	13.9	2.65	0.92
018008 Leny at Arnie C.A: 190.0 km^2	73..95	2385		2106		12.69	168.3	16/01 1993	0.16	25/08 1984	32.2	7.21	0.76
M.A: SEPA-E Local No: 35 Sens.: 10.2 B/full: 127.0m^3s^{-1}													
F.A.R: N Level: 120m UE: <.01 FAI: 0.785													
Comment: Well sited station on a natural section of an upland gravel bed river draining steep slopes. As site is adjacent to a picnic area the gravel bar low flow control is susceptible to rearrangement by children. Catchment response is damped by two large natural storage lochs. # Catchment is underlain by metamorphic rocks with igneous intrusions. Mostly open heather moorland; rugged topography.	1996	1928	81	1742	83	10.46	91.3	04/11	0.34	23/09	26.8	5.71	0.71
	1997	2190	92	2133	101	12.85	145.5	02/03	0.68	19/08	31.7	7.10	1.38
	1998	2546	107	2344	111	14.12	80.1d	12/02	0.74	30/05	32.0	10.26	1.55
	1999	2693	113	2488	118	14.99	101.4d	24/12	0.75	12/08	35.1	10.19	1.44
	2000	2497	105	2286	109	13.74	81.2d	01/02	0.60	26/07	35.5	7.81	1.24
018003 Teith at Bridge of Teith C.A: 517.7 km^2	57..95	*2035*		1417		23.26	378.3	16/01 1993	2.07	19/09 1959	55.3	13.25	4.16
M.A: SEPA-E Local No: 34 Sens.: 6.5 B/full: 163.0m^3s^{-1}													
F.A.R: SPI Level: 15m UE: <.01 FAI: 0.834													
Comment: Well sited station on straight, natural river section 70m wide. On 6/6/56 recorder was moved d/s to its current position. No rating available for earlier period from 7/4/40. Steep banks of 3m have contained all recorded floods. Six large lochs in catchment - some supplying water to Glasgow. Abstractions for industry in Doune. Regulation for HEP affects hourly, but not daily, flows. # Complex geology: predominantly metamorphic rocks. The Teith drains from the Trossachs.	1996	1798	88	1255	89	20.54	216.0	04/11	3.22	22/09	47.3	12.03	3.63
	1997	1974	97	1407	99	23.10	346.5	19/02	3.88	19/08	53.5	12.09	4.73
	1998	2363	116	1817	128	29.82	311.8	22/10	3.94	30/05	68.7	19.39	4.79
	1999	2438	120	1947	137	31.97	193.3d	24/12	4.37	12/08	85.0	19.94	5.72
	2000	2296	113	1806	127	29.57	150.9d	06/01	3.41	27/07	79.0	15.79	4.60
018020 Loch Ard Burn at Duchray C.A: 0.9 km^2	90-95	2270		1818		0.05	2.5	08/01 1993	>0.00	01/09 1995	0.1	0.02	>0.00
M.A: SEPA-E Local No: Sens.:													
F.A.R: N Level: 80m UE: FAI:													
Comment: Flume affected by gravel sediment. # Geology: impermeable Pre-Cambrian strata, Drift free. Small catchment with max. altitude of approx. 220m, within Loch Ard Forest.	1996	1751	77	1393	77	0.04	1.8	31/12	>0.00	26/06	0.1	0.01	
	1997	1820	80										
	1998	2443	108	2012	111	0.05	0.7d	11/02	>0.00	23/05	0.1	>0.00	>0.00
	1999	2403	106	1797	99	0.05	0.4d	02/01	>0.00	18/08	0.1	>0.00	>0.00
	2000	2274	100										
018021 Loch Ard Burn at Elrig C.A: 1.5 km^2	90-95	2266		1653		0.08	3.8	08/01 1993	>0.00	08/08 1995	0.2	0.03	>0.00
M.A: SEPA-E Local No: Sens.: B/full: 4.3m^3s^{-1}													
F.A.R: N Level: 80m UE: FAI:													
Comment: Flume, requires constant maintenance to clear d/s gravels. # Geology: impermeable Pre-Cambrian strata, Drift free. Small catchment with max. altitude of approx. 220m, within Loch Ard Forest.	1996	1743	77	1230	74	0.06	2.1	28/10	>0.00	18/07	0.2	>0.00	>0.00
	1997	1809	80	1300	79	0.06	2.2	16/09	>0.00	19/08	0.2	>0.00	>0.00
	1998	2437	108	1947	118	0.09	1.3d	11/02	>0.00	26/05	0.2	>0.00	>0.00
	1999	2395	106	1827	111	0.08	0.7d	02/01	>0.00	22/08	0.2	>0.00	>0.00
	2000	2254	99										
018010 Forth at Gargunnock C.A: 397.0 km^2	86-95	1825		1235		15.55	134.0	11/12 1994	0.29	05/07 1995	42.5	7.64	1.02
M.A: SEPA-E Local No: 40 Sens.: 4.4 B/full: 137.8m^3s^{-1}													
F.A.R: N Level: 4m UE: FAI:													
Comment: Velocity-area station with control at road bridge. Difficult to measure slow velocities by c/m at low stages. Rising air-bubble technique (RAFT) was used at low stages, but station has now been successfully rated by c/m 5km u/s. # Upper catchment: heavily forested highland. Lower reaches, where river meanders extensively, supports agriculture. Three lochs influence the flow regime.	1996	1482	81	996	81	12.51	105.5	29/10	0.41	23/09	38.4	5.93	0.71
	1997	1554	85	999	81	12.58	105.4	20/02	1.01	28/07	34.2	5.53	1.38
	1998	2009	110	1428	116	17.98	114.4d	12/02	1.20	05/06	40.5	11.30	1.93
	1999	1978	108	1365	111	17.18	101.9d	28/11	0.52	24/08	45.2	8.86	1.41
	2000	1873	103	1288	104	16.17	94.0d	30/10	0.67	28/07	43.9	8.25	1.12
018011 Forth at Craigforth C.A: 1036.0 km^2	81..95	1918		1537		50.48	966.0	16/01 1993	2.96	16/08 1984	125.7	28.00	5.36
M.A: SEPA-E Local No: 55 Sens.: B/full: 190.1m^3s^{-1}													
F.A.R: N Level: 4m UE: FAI:													
Comment: Originally opened in 1972 - known as Drip Bridge. Rebuilt on same site in 1982. 70m wide section - part of a large meander just above the tidal limit. Left bank floods at high stages. Low flows measured d/s in tidal section. Large tides can influence levels for short periods; data corrected. Flow velocities low, but stable control. A good rating exists over the whole range. # Geology: Devonian and Carboniferous sedimentaries in lower catchment; metamorphic rocks with igneous intrusions above. Mostly heather moorland; rugged.	1996	1602	84	1053	69	34.51	335.4	04/11	3.06	23/09	86.1	20.93	4.39
	1997	1722	90	1165	76	38.27	529.7	20/02	4.45	19/08	93.4	20.73	5.68
	1998	2127	111	1526	99	50.14	420.7d	22/10	4.00	05/06	113.5	31.71	5.90
	1999	2155	112	1556	101	51.10	330.3d	24/12	4.79	23/08	123.2	31.73	7.12
	2000	2032	106	1425	93	46.67	220.1d	01/02	3.03	26/07	120.2	28.12	4.81
018001 Allan Water at Kinbuck C.A: 161.0 km^2	57..95	1356		999		5.10	130.0	16/01 1993	0.35	19/09 1976	11.5	3.05	0.83
M.A: SEPA-E Local No: 37 Sens.: 7.1 B/full: 34.0m^3s^{-1}													
F.A.R: N Level: 93m UE: <.01 FAI: 0.984													
Comment: Velocity-area station; stage recorder sited 40m u/s of twin-arch bridge which acts as control at all stages. Gabions installed in 1980 beneath one arch to stabilise control. Steep section contains all floods. Stable rating, well defined throughout full range. Flows are broadly natural. River level protected by SOAEFD. # River flows through broad flat valley. Lateral tributaries drain steep hillsides. Geology: predominantly ORS.	1996	1306	96	881	88	4.49	68.4	28/10	0.55	20/09	10.4	2.72	0.64
	1997	1411	104	881	88	4.50	66.1	17/02	0.76	29/08	10.4	2.44	0.89
	1998	1714	126	1242	124	6.34	44.2d	21/10	1.16	11/07	13.3	4.07	1.36
	1999	1684	124	1292	129	6.60	46.8d	24/12	1.01	24/08	14.6	3.78	1.26
	2000	1604	118	1248	125	6.35	64.8d	29/10	0.83	28/07	13.8	4.01	1.09
018005 Allan Water at Bridge of Allan C.A: 210.0 km^2	71..95	1334		1007		6.70	194.3	16/01 1993	0.58	27/08 1984	15.5	4.01	0.89
M.A: SEPA-E Local No: 36 Sens.: 8.7 B/full: 230.0m^3s^{-1}													
F.A.R: I Level: 11m UE: <.01 FAI: 0.983													
Comment: Velocity-area station; recorder sited in natural reach with vertical stone wall on rb. Lb steep to 2.6m. Flood rating stable but large boulders make c/m a problem at low flows. As site is within a caravan park the low flow control is susceptible to rearrangment by children. Station useful for obtaining flood data, as flooding frequently occurs in the town of Bridge of Allan. # The Allan Water occupies a broad flat valley with steep lateral tributaries. Geology: predominantly Old Red Sandstone.	1996	1259	94	914	91	6.07	106.5	28/10	0.69	21/09	13.9	3.52	0.79
	1997	1347	101	908	90	6.05	109.4	20/02	0.95	26/08	13.8	3.18	1.08
	1998	1645	123	1370	136	9.12	156.7	20/10	1.57	08/07	19.0	5.69	1.94
	1999	1624	122	1195	119	7.98	56.9d	28/11	1.13	24/08	18.0	4.56	1.42
	2000	1539	115	1194	119	7.93	50.1d	27/02	0.93	27/07	18.4	5.17	1.22

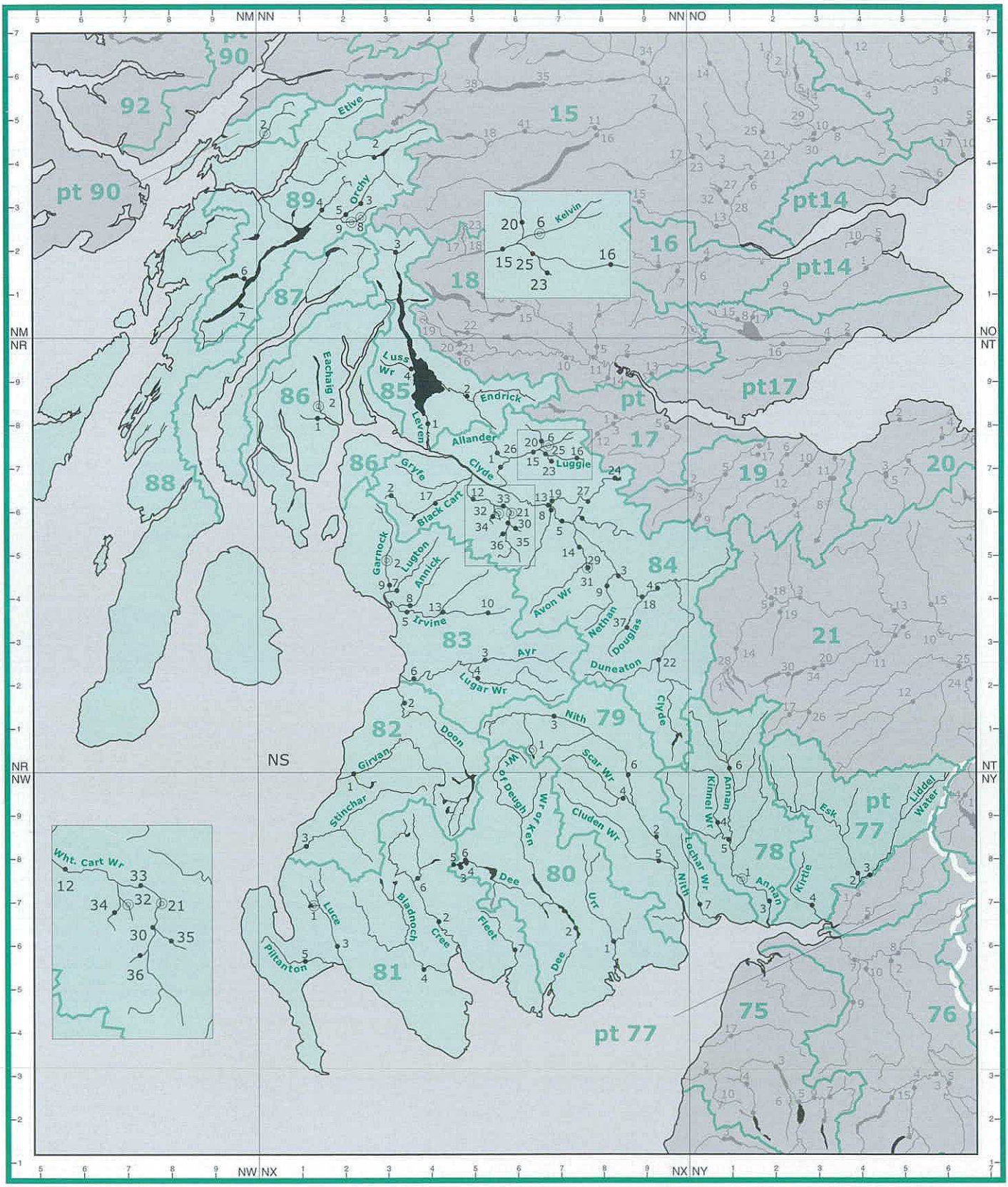
		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
018014	**Bannock Burn at Bannockburn** C.A: 23.7 km^2	**86-95**	**1488**		**1202**		**0.90**	**38.1**	**01/01 1991**	**0.13**	**14/07 1992**	**2.0**	**0.50**	**0.21**
M.A: SEPA-E	Local No: 51 Sens.: 14.1 B/full: 12.4m^3s^{-1}													
F.A.R: P	Level: 12m UE: FAI:													
Comment: Gabion river control initially showed signs of instability, but is now stable. Small reservoirs in catchment have a slight effect on otherwise natural flows. # Catchment is mostly moorland.		1996	1219	82	903	75	0.68	14.9	28/10	0.17	01/08	1.4	0.37	0.18
		1997	1271	85	906	75	0.68	22.0	17/02	0.17	10/09	1.2	0.37	0.20
		1998	1644	110	1337	111	1.00	10.6d	20/10	0.21	05/06	2.0	0.60	0.24
		1999	1676	113	1186	99	0.89	8.0d	24/12	0.15	03/09	2.3	0.43	0.16
		2000	1575	106	1296	108	0.97	6.5d	27/02	0.21	02/07	2.4	0.52	0.22
018002	**Devon at Glenochil** C.A: 181.0 km^2	**59-95**	**1320**		**776**		**4.45**	**115.0**	**16/01 1993**	**0.53**	**25/09 1976**	**9.2**	**2.80**	**1.01**
M.A: SEPA-E	Local No: 38 Sens.: 4.3 B/full: 59.0m^3s^{-1}													
F.A.R: SI	Level: 6m UE: <.01 FAI: 0.942													
Comment: Natural section with steep banks and good stable flood rating. Low flow control is gravel bar under road bridge 100m d/s. Severe weed growth in summer and very low velocities make low flow measurement difficult. RAFT rising air-bubble technique has been used unsuccessfully. Low flows moderated by Castlehill Res. in headwaters, commissioned in 1977. River level protected. # Headwaters are steep and composed of extrusive igneous rocks; lower valley is broad and very flat.		1996	1266	96	664	86	3.80	51.3	28/10	0.75	20/09	8.0	2.39	0.89
		1997	1285	97	637	82	3.65	64.1	21/02	1.24	08/08	7.4	2.00	1.33
		1998	1755	133	1184	153	6.80	64.5d	21/10	1.51	05/06	13.1	4.68	1.77
		1999	1647	125	989	127	5.67	42.5d	06/12	1.27	15/09	12.0	3.55	1.62
		2000	1670	127	1075	139	6.15	43.2d	01/02	1.05	21/07	13.8	4.11	1.28
018013	**Black Devon at Fauld Mill** C.A: 56.2 km^2	**86-95**	**1021**		**513**		**0.91**	**41.9**	**18/03 1991**	**0.07**	**06/05 1987**	**2.1**	**0.45**	**0.15**
M.A: SEPA-E	Local No: 44 Sens.: 19.8 B/full: 32.6m^3s^{-1}													
F.A.R: P	Level: 9m UE: FAI:													
Comment: Concrete weir control which is stable, good full-range rating (but control subject to interference by children damming with bricks in summer). Station commissioned to replace unsatisfactory flume station further u/s at Little Saline. Lade takeoff to Gartmore Dam for potable water supplies for Alloa. Upstream minewater pumping sustains higher than normal baseflows. # Flows W from Cleish Hills to join Forth Estuary below Clachmannan.		1996	872	85	438	85	0.78	16.6	28/10	0.19	20/09	1.8	0.44	0.21
		1997	909	89	409	80	0.73	27.3	20/02	0.21	24/05	1.5	0.36	0.26
		1998	1239	121	691	135	1.23	11.1d	03/04	0.29	22/05	2.7	0.75	0.33
		1999	1134	111	525	102	0.94	9.8d	28/11	0.30	04/09	1.9	0.44	0.33
		2000	1195	117	683	133	1.21	8.9d	08/12	0.32	11/08	2.7	0.62	0.35
019020	**Almond at Whitburn** C.A: 30.3 km^2	**86-95**	**1186**		**750**		**0.72**	**37.0**	**06/10 1990**	**0.04**	**18/07 1986**	**1.7**	**0.29**	**0.08**
M.A: SEPA-E	Local No: 24 Sens.: B/full: 27.7m^3s^{-1}													
F.A.R: EN	Level: 156m UE: FAI:													
Comment: Small concrete weir in fairly steeply banked channel which was realigned for an agricultural drainage scheme. All flows are contained. U/s of Whitburn STW and is the only natural station on the Almond. # Land use: mainly agricultural with increasing amounts of forestry and land drainage. Several opencast coal sites, but these have all been filled in.		1996	881	74	546	73	0.52	13.3	28/10	0.02	17/07	1.3	0.17	0.02
		1997	1046	88	706	94	0.68	18.6	13/08	0.09	02/10	1.6	0.31	0.10
		1998	1376	116	1103	147	1.06	8.3d	16/10	0.08	27/05	2.5	0.55	0.15
		1999	1201	101	858	114	0.82	9.6d	28/11	0.06	21/08	2.2	0.30	0.09
		2000	1368	115	1127	150	1.08	14.8d	06/11	0.07	23/07	2.6	0.42	0.09
019002	**Almond at Almond Weir** C.A: 43.8 km^2	**62-95**	**1083**		**678**		**0.94**	**26.5**	**03/11 1984**	**0.07**	**30/07 1992**	**2.3**	**0.44**	**0.14**
M.A: SEPA-E	Local No: 14 Sens.: S/full: 24.0m^3s^{-1}													
F.A.R: E	Level: 128m UE: .03 FAI: 0.998													
Comment: The control is a broad-crested masonry weir of a former pumping station intake works. The sluice is permanently closed. The structure has been rated by c/m to 0.6m, there is no cableway. Structurefull: 1.4m has been exceeded several times during the period of record. Land use changes may have affected the flow regime. # Mainly plateau moorland (much artificially drained) - substantial afforestation in the headwaters. Predominantly rough pasture with small mining communities in the valley.		1996	870	80	430	63	0.60	12.6	12/10	0.08	22/09	1.4	0.21	0.10
		1997	1028	95	531	78	0.74	16.8	04/05	0.09	31/01	1.6	0.31	0.12
		1998	1361	126	886	131	1.23	10.1d	08/04	0.16	07/07	2.8	0.63	0.21
		1999	1187	110	771	114	1.07	11.4d	28/11	0.23	23/08	2.7	0.46	0.25
		2000	1354	125	1012	149	1.40	17.3d	06/11	0.08	20/07	3.6	0.65	0.16
019005	**Almond at Almondell** C.A: 229.0 km^2	**62..95**	**975**		**548**		**3.98**	**214.6**	**06/10 1990**	**0.19**	**14/10 1972**	**9.3**	**1.93**	**0.54**
M.A: SEPA-E	Local No: 5 Sens.: B/full: 700.0m^3s^{-1}													
F.A.R: PEI	Level: 74m UE: .03 FAI: 0.957													
Comment: Informal Flat V weir - installed at the site in Jun 1970. Structure widened and a sluice incorporated - Jun 1971. Previous control - natural bar with large boulders. Calibration is entirely by c/m. Immediately above the station a measured quantity of water is abstracted to supply a canal. Low flows - significantly increased by discharge from East Calder sewage works. # The catchment is composed of mainly Carboniferous rocks. Land use: predominantly rural. Livingston new town and several small coal mining towns in catchment.		1996	816	84	448	82	3.25	68.1	18/12	0.45	17/05	7.0	1.32	0.61
		1997	992	102	*585*	107	4.25					9.4	2.14	0.63
		1998	1299	133	861	157	6.25	45.5d	16/10	0.76	25/05	14.2	3.78	1.08
		1999	1129	116	670	122	4.86	61.1d	28/11	0.71	22/08	12.0	2.20	0.83
		2000	1302	134	901	164	6.52	112.8d	06/11	0.52	30/06	14.7	3.11	0.75
019017	**Gogar Burn at Turnhouse** C.A: 38.8 km^2	**86..95**	**824**		**413**		**0.51**	**23.1**	**14/05 1993**	**0.01**	**14/09 1990**	**1.1**	**0.26**	**0.04**
M.A: SEPA-E	Local No: 29 Sens.: B/full: 100.0m^3s^{-1}													
F.A.R: P	Level: 32m UE: FAI:													
Comment: Rated section with small low flow control and large masonry broad crested weir controlling higher flows. The river tends to flood u/s of the station with consequent damping of its hydrographs. Small net impact on runoff due to airport discharges. # Catchment includes part of Edinburgh, and urban fraction is increasing. 1.5km of the river has been culverted because of new development. The rest is agricultural.		1996	648	79	267	65	0.33	8.2	18/12	0.02	20/07	0.8	0.18	0.03
		1997	809	98	430	104	0.53	9.8	01/07	0.05	03/10	1.2	0.24	0.07
		1998	1018	124	600	145	0.74	6.2d	02/11	0.14	21/09	1.6	0.48	0.19
		1999	798	97	340	82	0.42	6.0d	28/11	0.04	15/09	0.9	0.20	0.06
		2000	1037	126	516	125	0.63	17.9d	26/04	0.05	29/06	1.2	0.32	0.06
019001	**Almond at Craiglehall** C.A: 369.0 km^2	**57-95**	**906**		**503**		**5.88**	**220.0**	**06/10 1990**	**0.24**	**09/10 1959**	**13.4**	**2.93**	**0.92**
M.A: SEPA-E	Local No: 3 Sens.: B/full: 215.0m^3s^{-1}													
F.A.R: PEI	Level: 23m UE: .03 FAI: 0.969													
Comment: Recorder is well sited on straight even reach with steep banks containing all recorded floods. Stable rating. Weed growth in summer - some adjustment to stage required. Low flows substantially affected by sewage effluent esp. from Mid Calder and Newbridge STW and six smaller STWs. Abstraction at Almondell to feed a canal. A number of storage reservoirs are situated in the catchment. # Geology: predominantly Carboniferous rocks. Land use: rural, with extensive urban development around Livingston, esp. industrial estates, and several small mining towns.		1996	759	84	388	77	4.52	87.3	18/12	0.88	03/08	10.1	2.24	1.07
		1997	920	102	488	97	5.71	111.0	11/12	0.93	02/05	12.1	3.03	1.10
		1998	1200	132	751	149	8.79	117.3	02/11	1.60	25/09	19.3	5.36	2.08
		1999	1019	112	581	116	6.79	84.1d	28/11	1.31	24/08	16.4	3.33	1.46
		2000	1206	133	762	151	8.89	125.4d	26/04	0.99	01/07	20.0	4.38	1.22
019012	**Water of Leith at Colinton** C.A: 72.0 km^2	**86..95**	**995**		**553**		**1.26**	**122.5**	**06/10 1990**	**0.19**	**21/03 1993**	**2.7**	**0.67**	**0.32**
M.A: SEPA-E	Local No: 23 Sens.: 19.9													
F.A.R: SR	Level: 92m UE: FAI:													
Comment: Flat V weir. Flows fully contained in vertical channel walls. Built to measure compensation flows from reservoirs in the Lothian region; these dominate the summer hydrographs. Uses theoretical rating (confirmed by gauging). # Catchment is almost entirely rural. The SW edge of the catchment is steep (Pentland Hills) rising to over 500m; the rest has moderate slopes. There is some forestry and two major reservoirs.		1996	752	76											
		1997	940	94	512	93	1.17	*22.8*	*30/06*	0.25	22/09	2.7	0.52	0.32
		1998	1240	125	745	135	1.70	12.6d	12/11	0.34	25/05	3.3	1.31	0.52
		1999	1030	104	532	96	1.21	12.5d	12/12	0.22	08/08	2.7	0.58	0.27
		2000	1290	130	784	142	1.79	65.4d	26/04	0.22	30/07	3.2	0.87	0.35
019006	**Water of Leith at Murrayfield** C.A: 107.0 km^2	**63-95**	**887**		**426**		**1.44**	**87.2**	**06/10 1990**	**0.13**	**20/07 1978**	**2.9**	**0.81**	**0.34**
M.A: SEPA-E	Local No: 4 Sens.: 12.3 B/full: 86.0m^3s^{-1}													
F.A.R: SR	Level: 38m UE: .10 FAI: 0.943													
Comment: Velocity-area station in a straight even reach 50m u/s of a road bridge. The rb is a vertical wall and the lb is steep to 2.6m. The high flow control is possibly the piers of a railway bridge 0.5km d/s. The catchment contains several storage reservoirs. # The headwaters of the catchment are in the Pentland Hills. The lower part of the catchment has undergone urban development.		1996	692	78	342	80	1.16	18.4	18/12	0.41	12/09	2.3	0.65	0.43
		1997	885	100	439	103	1.49	25.7	30/06	0.32	22/09	3.4	0.71	0.40
		1998	1143	129	618	145	2.10	14.1d	02/11	0.40	25/05	4.2	1.63	0.62
		1999	926	104	471	111	1.60	15.5d	12/12	0.30	28/07	3.5	0.80	0.37
		2000	1180	133	653	153	2.21	51.8d	26/04	0.23	30/07	4.2	1.30	0.45
019010	**Braid Burn at Liberton** C.A: 16.2 km^2	**69..95**	**778**		**298**		**0.15**	**11.2**	**28/05 1983**	**0.02**	**12/10 1989**	**0.3**	**0.09**	**0.03**
M.A: SEPA-E	Local No: 16 Sens.: S/full: 20.0m^3s^{-1}													
F.A.R: N	Level: 50m UE: .15 FAI: 0.953													
Comment: Flows were originally measured by a Crump profile weir and trapezoidal flume in parallel. The flume suffered from choking by domestic refuse and childrens dams and so was replaced in Oct 1985 by a second Crump profile weir at a lower level than the first. # The headwater tributaries are steep rising in the Pentland Hills, whilst the lower part of the catchment is urbanised. Several small reservoirs in headwaters. Complex geology - Silurian/Devonian sedimentaries and igneous intrusions.		1996	625	80	281	94	0.14	1.9	18/12	**0.01**	**17/09**	0.3	0.12	0.02
		1997	833	107	473	159	0.24	3.4	10/12	0.05	24/04	0.5	0.18	0.08
		1998	1033	133	596	200	0.31	1.3d	31/05	0.08	11/01	0.5	0.27	0.16
		1999	805	103	542	182	0.28	1.4d	11/12	0.10	24/08	0.5	0.25	0.12
		2000	1063	137	706	237	0.36	8.0d	26/04	0.06	07/07	0.6	0.32	0.08

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
019004	**North Esk at Dalmore Weir** C.A: 81.6 km^2	**60-95**	**957**		**586**		**1.52**	**52.1**	**06/10 1990**	**0.10**	**30/07 1992**	**3.2**	**1.00**	**0.35**
M.A: SEPA-E	Local No: 11 Sens.: 36.9 B/full: 110.0m^3s^{-1}													
F.A.R: SEI	Level: 132m UE: .02 FAI: 0.978													
Comment: The control is a dog-legged 25m wide ogee section masonry weir rated entirely by c/m. There is no cableway and the gauging is correlated to a stage of 0.34m. Several small storage reservoirs in the headwaters. # The catchment drains the SE slopes of the Pentland hills. Geology: Carboniferous and Devonian sedimentaries with igneous intrusions. Rural catchment - mostly rough grazing.		1996	789	82	467	80	1.21	15.8	18/12	0.26	10/09	2.6	0.71	0.31
		1997	976	102	597	102	1.54	18.9	20/02	0.34	28/10	3.6	0.91	0.46
		1998	1294	135	862	147	2.23	10.7d	02/11	0.61	07/07	4.3	1.73	0.80
		1999	1074	112	692	118	1.79	12.1d	05/11	0.40	15/09	3.7	1.23	0.53
		2000	1326	139	868	148	2.24	22.3d	26/04	0.43	06/08	4.6	1.58	0.49
019011	**North Esk at Dalkeith Palace** C.A: 137.0 km^2	**63-95**	**914**		**498**		**2.16**	**113.9**	**06/10 1990**	**0.33**	**29/08 1965**	**4.3**	**1.35**	**0.56**
M.A: SEPA-E	Local No: 18 Sens.: 9.0 B/full: 150.0m^3s^{-1}													
F.A.R: GN	Level: 29m UE: .02 FAI: 0.967													
Comment: The recorder is sited on a bend in a natural river reach immediately u/s of a footbridge. Flow velocities are faster near the right bank, especially in floods. The water is stained red from effluent pumped from mine workings. The rb is a vertical stone wall, whilst the lb slopes gently to the hut at 2.5m. # Geology: Carboniferous and Devonian sedimentaries with igneous intrusions. The headwaters drain the steep slopes of the Pentland Hills. Mostly rough grazing.		1996	752	82	357	72	1.55	31.5	18/12	0.41	02/10	3.0	1.16	0.44
		1997	946	104	528	106	2.29	39.2	20/02	0.87	26/10	4.6	1.36	0.96
		1998	1223	134										
		1999	1008	110	531	107	2.31	14.8d	12/12	0.73	15/09	4.6	1.56	0.80
		2000	1271	139	761	153	3.30	58.0d	26/04	0.88	06/08	6.0	2.06	0.94
019007	**Esk at Musselburgh** C.A: 330.0 km^2	**62-95**	**852**		**392**		**4.10**	**175.6**	**14/08 1966**	**0.67**	**08/08 1989**	**8.4**	**2.48**	**0.95**
M.A: SEPA-E	Local No: 2 Sens.: 7.2 B/full: 200.0m^3s^{-1}													
F.A.R: SPEI	Level: 3m UE: .02 FAI: 0.952													
Comment: Velocity-area station in a section with steep banks. High rating appears to oscillate with periodic dredging and accretion of a bar on the rb. Flows abstracted u/s of the main station along a mill lade were monitored (until late 1980s) - summation needed to give total basin runoff. Floods of 1891 and 1948 reached about 1m above bankfull at Inversesk Mill. # The catchment is predominantly exposed moorland (on Carboniferous sediments) of the Moor foothills with several small former mining towns in the valley.		1996	709	83	316	81	3.29	55.1	18/12	0.83	17/09	6.6	2.20	0.91
		1997	890	104	*447*	114	4.68					10.1	2.81	1.41
		1998	1097	129	606	155	6.34	46.3d	03/11	1.36	10/07	12.5	4.47	1.81
		1999	904	106	486	124	5.08	36.3d	12/12	0.97	15/09	11.7	2.98	1.20
		2000	1154	135	*627*	160	6.54					12.3	3.90	1.63
020002	**West Peffer Burn at Luffness** C.A: 26.2 km^2	**66..95**	**619**		**160**		**0.13**	**5.9**	**04/01 1982**	**0.00**	**15/08 1995**	**0.3**	**0.06**	**0.01**
M.A: SEPA-E	Local No: 1 Sens.: 19.4 B/full: 78.0m^3s^{-1}													
F.A.R: I	Level: 4m UE: <.01 FAI: 0.995													
Comment: The section is within steep banks on a straight reach of a small ditch with low gradient. Flows are measured by a trapezoidal flume and Crump profile weir in parallel. Low flows are severely reduced by abstraction for spray irrigation during dry summers. # The catchment drains flat arable land. A mainly impervious catchment with an extensive Boulder Clay cover.		1996	461	74	66	41	0.05	3.3	03/12	0.00	16/07	0.1	>0.00	>0.00
		1997	639	103	140	88	0.12	2.8	01/07	0.02	11/08	0.2	0.06	0.02
		1998	747	121	226	141	0.19	3.4d	13/11	0.04	27/05	0.4	0.09	0.05
		1999	569	92	118	74	0.10	1.5d	25/01	0.01	30/07	0.2	0.06	0.02
		2000	767	124	225	141	0.19	2.6d	07/11	0.01	04/08	0.4	0.10	0.03
020005	**Birns Water at Saltoun Hall** C.A: 93.0 km^2	**65..95**	**739**		**318**		**0.94**	**94.6**	**03/11 1984**	**0.07**	**08/09 1969**	**1.9**	**0.52**	**0.17**
M.A: SEPA-E	Local No: 9 Sens.: 8.2 B/full: 58.0m^3s^{-1}													
F.A.R: N	Level: 71m UE: <.01 FAI: 0.993													
Comment: A natural section on a straight, well defined reach. The low flow control is a compound irregular broad-crested weir. Rating is entirely by c/m. Before installation of the cableway the high flow rating was calculated by correlation with Spilmersford (20003) and c/m measurements from a bridge 100m u/s. There are a few small storage reservoirs in the catchment, otherwise flows are natural. # The catchment drains the upland moorland of the Lammermuir Hills. Geology: Silurian/ Devonian sedimentaries.		1996	636	86	256	81	0.75	20.8	03/12	0.13	31/08	1.5	0.40	0.15
		1997	810	110	353	111	1.04	36.3	28/06	0.22	29/10	2.1	0.53	0.25
		1998	920	124	436	137	1.29	21.1d	02/11	0.28	25/05	2.7	0.74	0.37
		1999	742	100	276	87	0.81	8.4d	12/12	0.20	14/09	1.6	0.48	0.23
		2000	1003	136	475	149	1.40	49.5d	07/11	0.16	08/08	1.9	0.69	0.23
020003	**Tyne at Spilmersford** C.A: 161.0 km^2	**65..95**	**728**		**267**		**1.36**	**131.2**	**03/11 1984**	**0.14**	**01/09 1976**	**2.8**	**0.76**	**0.27**
M.A: SEPA-E	Local No: 7 Sens.: 26.3 B/full: 130.0m^3s^{-1}													
F.A.R: I	Level: 69m UE: <.01 FAI: 0.993													
Comment: The channel reach is within steep, high floodbanks which contain all floods. In Sep 1975 an irregular broad-crested weir was installed. Before that date the low flow control was a gravel bar. The gauge board was lowered by 0.125m on 1/9/69. Flows from this station are used as part of the Haddington flood warning system. # The headwaters drain exposed moorland.		1996	604	83	213	80	1.09	20.7	18/12	0.20	25/09	2.3	0.59	0.22
		1997	788	108	297	111	1.51	37.7	30/06	0.32	02/10	3.4	0.79	0.35
		1998	884	121	391	146	2.00	20.9d	02/11	0.55	18/08	3.9	1.28	0.60
		1999	702	96	251	94	1.28	11.6d	12/12	0.30	03/08	2.6	0.78	0.33
		2000	961	132	424	159	2.16	60.0d	07/11	0.37	08/08	3.3	1.17	0.44
020007	**Gifford Water at Lennoxlove** C.A: 64.0 km^2	**73-95**	**782**		**340**		**0.69**	**75.6**	**28/05 1983**	**0.08**	**07/08 1992**	**1.4**	**0.40**	**0.15**
M.A: SEPA-E	Local No: 13 Sens.: 19.7													
F.A.R: N	Level: 51m UE: <.01 FAI: 0.980													
Comment: Velocity-area station. The recorder is sited immediately d/s of a footbridge on a slight bend in a natural channel. The low flow control is a stable rock bar. The flow regime is flashy. # Geology: predominantly Silurian and Ordovician beds. The catchment drains the steep moorland slopes of the Lammermuir Hills.		1996	697	89	316	93	0.64	19.0	03/12	0.13	18/08	1.4	0.40	0.14
		1997	800	102	382	112	0.77	31.3	30/06	0.20	29/10	1.5	0.47	0.23
		1998	934	119	498	146	1.01	14.4d	02/11	0.31	07/09	1.8	0.67	0.36
		1999	706	90	289	85	0.59	5.2d	12/12	0.17	05/09	1.1	0.40	0.19
		2000	992	127	601	177	1.22	34.8d	06/11	0.24	19/07	1.8	0.64	0.28
020001	**Tyne at East Linton** C.A: 307.0 km^2	**61-95**	**725**		**282**		**2.75**	**148.5**	**06/10 1990**	**0.33**	**06/09 1969**	**5.5**	**1.58**	**0.56**
M.A: SEPA-E	Local No: 6 Sens.: 8.4 B/full: 300.0m^3s^{-1}													
F.A.R: EI	Level: 17m UE: <.01 FAI: 0.991													
Comment: The low flow control is a gravel bar some 100m d/s. In 1970 a pipe crossing was constructed but did not unduly influence the rating. During 1982 recorded stage was adjusted during rebuilding of the road bridge 200m d/s. This provides a stable high-flow control. Allowance is made for weed growth during the summer when abstraction for irrigation also takes place. # The catchment is characterised by steep headwaters in the Lammermuir Hills and broad flat arable valleys. Geology: Silurian and Ordovician sedimentary rocks.		1996	603	83	222	79	2.15	57.7	03/12	0.45	18/07	4.1	1.31	0.51
		1997	764	105										
		1998	858	118	398	141	3.88	74.7	02/11	1.18	31/08	7.0	2.57	1.32
		1999	673	93	247	88	2.40	26.0d	12/12	0.70	11/08	4.4	1.58	0.80
		2000	923	127	402	143	3.90	88.0d	07/11	0.84	22/07	6.1	2.23	0.93
021014	**Tweed at Kingledores** C.A: 139.0 km^2	**61..95**	**1634**		**922**		**4.06**	**226.5**	**18/10 1987**	**0.46**	**06/10 1972**	**9.0**	**2.15**	**0.90**
M.A: SEPA-E	Local No: Sens.: 8.3 B/full: 210.0m^3s^{-1}													
F.A.R: SP	Level: 214m UE: FAI:													
Comment: Natural section on upper Tweed. Coarse gravel bed. Variable backwater effects from Kingledores Burn 10m below station. Exports from Fruid and Talla Reservoirs cause a significant reduction in runoff - monthly naturalised flows available. # Impervious (mostly Silurian formations) upland catchment given over mainly to hill grazing and forestry.		1996	1439	88	847	92	3.72	77.8	08/01	0.73	23/09	9.2	2.19	0.83
		1997	1704	104	993	108	4.38	169.4	19/02	1.02	26/08	10.7	1.99	1.11
		1998	1811	111	1148	125	5.06	62.1	20/10	0.99	08/10	10.1	3.56	1.29
		1999	2047	125	1104	120	4.87	139.2	28/11	0.96	24/08	10.7	2.55	1.13
		2000	2157	132	1261	137	5.54	116.8	24/10	0.92	23/07	12.5	2.75	1.06
021018	**Lyne Water at Lyne Station** C.A: 175.0 km^2	**68..95**	**958**		**543**		**3.01**	**83.5**	**11/12 1994**	**0.49**	**23/08 1976**	**6.4**	**1.97**	**0.69**
M.A: SEPA-E	Local No: Sens.: 7.7 B/full: 36.0m^3s^{-1}													
F.A.R: SP	Level: 168m UE: FAI:													
Comment: Velocity-area station. Flow fully concentrated by arches of bridge below station. Storage in - and abstraction from - Baddingsgill and Watch Water Reservoirs influence the flow regime; overall impact on annual runoff is limited - monthly naturalised flows available. # Mainly Silurian shale with Old Red Sandstone and considerable surface deposits of sand and gravel in centre of catchment. Mostly hill grazing and grassland.		1996	807	84	401	74	2.22	24.3	18/12	0.53	20/09	4.9	1.23	0.58
		1997	928	97	496	91	2.75	29.2	11/12	0.65	03/10	5.7	1.71	0.75
		1998	1206	126	746	137	4.14	44.9	03/11	1.08	25/05	7.7	3.18	1.27
		1999	1120	117	639	118	3.55	36.3	09/12	0.75	14/09	8.0	2.05	0.89
		2000	1254	131	769	142	4.26	65.3	07/11	0.69	23/07	8.6	2.74	0.79
021005	**Tweed at Lyne Ford** C.A: 373.0 km^2	**61..95**	**1327**		**775**		**9.16**	**266.0**	**16/01 1962**	**1.15**	**27/08 1984**	**19.5**	**5.85**	**2.02**
M.A: SEPA-E	Local No: Sens.: 9.0 B/full: 227.0m^3s^{-1}													
F.A.R: SP	Level: 167m UE: <.01 FAI: 0.965													
Comment: Natural section on straight gravel bedded reach. Cableway. Left bank overtopped during large floods. Slight seasonal weed growth effect on rating. Runoff diminished by abstractions from Fruid and Talla Reservoirs - compensation releases also influence flow regime. Monthly naturalised flows available. # Upland catchment developed mainly on Silurian shale - with alluvial gravel in valley bottoms. Land use: principally hill grazing.		1996	1127	85	671	87	7.91	88.9	08/01	1.41	23/09	18.4	4.77	1.71
		1997	1319	99	830	107	9.82	181.5	19/02	2.29	05/10	21.0	5.20	2.57
		1998	1474	111	981	127	11.61	78.8	20/10	2.68	26/05	22.5	9.32	3.21
		1999	1598	120	977	126	11.55	191.2	28/11	1.87	05/09	25.6	6.90	2.42
		2000	1665	125	1120	145	13.21	146.2	25/10	1.73	23/07	28.4	8.39	2.21

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
021019 Manor Water at Cademuir C.A: 61.6 km^2	**68..95**	**1448**		**817**		**1.60**	**40.2**	**30/10**	**0.16**	**27/08**	**3.4**	**1.07**	**0.30**
M.A: SEPA-E Local No: Sens.: 14.5 B/full: 58.0m^3s^{-1}								**1977**		**1984**			
F.A.R: P Level: 197m UE: <.01 FAI: 0.997													
Comment: Velocity-area station with artificial control - flat concrete bar with stone pitched banks. Site situated at end of straight reach with bend just below bar. Runoff is slightly diminished by an u/s abstraction (Langhaugh Intake); monthly naturalised flows available. # Steep catchment developed on Silurian shale. Land use: mostly hill grazing.	1996	1185	82	745	91	1.45	18.7	08/01	0.22	23/09	3.4	0.95	0.25
	1997	1345	93	864	106	1.69	28.4	19/02	0.32	30/08	4.0	0.96	0.36
	1998	1550	107	994	122	1.94	16.0	26/12	0.57	11/07	3.7	1.49	0.69
	1999	1539	106	966	118	1.89	29.0	28/11	0.23	05/09	4.2	1.25	0.31
	2000	1715	118	1128	138	2.20	28.5	19/09	0.33	27/07	4.5	1.73	0.43
021003 Tweed at Peebles C.A: 694.0 km^2	**59..95**	**1212**		**698**		**15.37**	**481.1**	**15/01**	**1.93**	**07/10**	**33.0**	**9.87**	**3.26**
M.A: SEPA-E Local No: Sens.: 6.6 B/full: 220.0m^3s^{-1}								**1962**		**1959**			
F.A.R: SP Level: 155m UE: <.01 FAI: 0.975													
Comment: Natural section with stable gravel bed. Cableway. From 1939 to 1958 flows measured at Priorsford Bridge about 360m u/s; records correlated from 1950. Storage in Talla, Fruid, Baddinsgill and Watch Water Reservoirs - overall runoff is diminished; monthly naturalised flows available. # Upland catchment developed on impervious Palaeozoic and igneous formations - with substantial Drift cover in the valleys. Hill grazing predominates; some improved grassland to N.	1996	1014	84	587	84	12.88	103.3	08/01	2.17	23/09	33.4	7.41	2.67
	1997	1170	97	694	99	15.28	208.3	19/02	3.33	05/10	33.8	8.87	3.94
	1998	1371	113	889	127	19.57	132.0	03/11	4.59	26/05	36.6	15.68	5.54
	1999	1400	116	853	122	18.77	202.2	28/11	3.61	11/09	42.5	11.44	3.81
	2000	1507	124	996	143	21.87	169.1	25/10	3.36	24/07	45.1	15.13	3.72
021030 Megget Water at Henderland C.A: 56.2 km^2	**68..95**	**1696**		**1068**		**1.90**	**104.4**	**11/12**	**0.11**	**09/07**	**4.3**	**1.11**	**0.31**
M.A: SEPA-E Local No: Sens.: 14.3 B/full: 76.0m^3s^{-1}								**1972**		**1977**			
F.A.R: S Level: 254m UE: <.01 FAI: 0.817													
Comment: Velocity-area station with rock and gravel bar acting as control. D/s of Megget Reservoir; station was installed to provide data for reservoir design - flows are highly artificial since impoundment began in 1982; monthly naturalised flows available. # A steep upland catchment developed on impervious Silurian formations. Land use: mostly hill grazing.	1996	1381	81	553	52	0.98	13.0	08/01	0.25	30/03	2.0	0.69	0.32
	1997	1772	104	988	93	1.76	34.0	01/03	0.44	05/10	4.2	1.09	0.49
	1998	1902	112	1333	125	2.37	11.3	16/08	0.31	02/02	5.4	1.56	0.43
	1999	2074	122	567	53	1.01	24.2	27/11	0.20	14/07	1.8	0.64	0.28
	2000	2237	132	1157	108	2.06	32.5	27/02	0.34	26/01	5.2	0.87	0.47
021034 Yarrow Water at Craig Douglas C.A: 116.0 km^2	**68..95**	**1608**		**1035**		**3.81**	**113.3**	**31/10**	**0.13**	**28/08**	**8.6**	**2.36**	**0.65**
M.A: SEPA-E Local No: Sens.: B/full: 145.0m^3s^{-1}								**1977**		**1976**			
F.A.R: S Level: 239m UE: <.01 FAI: 0.769													
Comment: Large trapezoidal flume. Sensibly natural runoff until impounding for Megget Res. began in 1982. St Mary's Loch 2km u/s attenuates floods significantly. Monthly naturalised flows available. # Silurian formations give impervious catchment supporting hill grazing and some forestry.	1996	1333	83	822	79	3.02	20.2	16/02	0.69	18/09	6.6	1.95	0.82
	1997	1659	103	1132	109	4.16	58.7	01/03	0.86	05/10	8.0	2.82	1.18
	1998	1801	112	1353	131	4.98	21.2	26/12	0.89	29/09	8.5	4.62	1.23
	1999	1890	118	939	91	3.45	65.8	28/11	0.62	03/08	7.0	2.33	0.80
	2000	2033	126	1248	121	4.58	48.5	05/12	0.99	25/07	10.1	2.43	1.08
021020 Yarrow Water at Gordon Arms C.A: 155.0 km^2	**67..95**	**1550**		**1040**		**5.11**	**166.0**	**30/10**	**0.15**	**28/08**	**11.6**	**3.09**	**0.81**
M.A: SEPA-E Local No: Sens.: 9.0 B/full: 90.0m^3s^{-1}								**1977**		**1976**			
F.A.R: SP Level: 226m UE: <.01 FAI: 0.821													
Comment: Velocity-area station d/s of road bridge on section with rough gravel bed. Sensibly natural runoff until impounding for Megget Res. began in 1982 but St Mary's Loch (few km u/s) attenuates floods significantly. Especially low flow in August 1976 due to damming of gravel bar prior to gravel extraction. Monthly naturalised flows available. # An impervious (Silurian formations) catchment given over to hill grazing with a little forestry.	1996	1295	84	762	73	3.73	30.2	08/01	0.73	18/09	8.7	2.15	0.84
	1997	1578	102	1064	102	5.23	75.5	19/02	0.87	05/10	10.1	3.78	1.30
	1998	1727	111	1329	128	6.53	31.9	26/12	0.99	26/05	11.0	6.37	1.61
	1999	1779	115	911	88	4.48	110.9	28/11	0.91	03/08	9.7	2.92	1.11
	2000	1917	124	1201	115	5.89	66.7	05/12	0.93	25/07	13.4	3.31	1.07
021011 Yarrow Water at Philiphaugh C.A: 231.0 km^2	**63..95**	**1408**		**919**		**6.73**	**272.5**	**31/10**	**0.39**	**05/09**	**15.2**	**4.08**	**1.08**
M.A: SEPA-E Local No: Sens.: 11.2 B/full: 296.0m^3s^{-1}								**1977**		**1976**			
F.A.R: S Level: 128m UE: <.01 FAI: 0.952													
Comment: Natural coarse gravel bedded straight section. Control unstable. Sensibly natural regime before Megget Res. began impounding in 1982 (small overall impact on water balance), and flood peaks are also attenuated by St Mary's Loch; monthly naturalised flows available. # Upland catchment developed mainly on Silurian shale (with alluvial gravel in the valleys). Hill grazing is the principal land use.	1996	1185	84	712	77	5.20	41.6	12/02	0.97	19/09	12.2	3.03	1.09
	1997	1404	100	907	99	6.65	107.6	19/02	1.04	05/10	13.7	4.69	1.56
	1998	1547	110	1104	120	8.09	57.5	02/11	1.28	26/05	13.9	7.49	1.95
	1999	1558	111	857	93	6.28	128.4	28/11	0.75	10/08	14.9	3.73	1.20
	2000	1703	121	1003	109	7.33	80.8	11/09	1.06	22/07	16.9	4.27	1.23
021017 Ettrick Water at Brockhoperig C.A: 37.5 km^2	**65..95**	**1892**		**1563**		**1.86**	**145.2**	**30/10**	**0.07**	**26/08**	**4.3**	**1.00**	**0.19**
M.A: SEPA-E Local No: Sens.: 18.1 B/full: 200.0m^3s^{-1}								**1977**		**1984**			
F.A.R: N Level: 259m UE: <.01 FAI: 1.000													
Comment: Velocity-area station on straight reach with rocky bed. Control by series of rocky bars and falls. Turbulent flow at higher stages. Heavy gravel load in floods. # Natural steep upland catchment containing much moorland and some forestry. Very responsive (geology: principally impervious Silurian formations).	1996	1598	84	1488	95	1.76	62.1	26/10	0.11	13/09	4.6	0.95	0.13
	1997	1903	101	1727	110	2.05	82.8	19/02	0.25	04/06	5.2	0.96	0.30
	1998	2163	114	1942	124	2.31	61.8	20/10	0.32	29/09	5.1	1.47	0.43
	1999	2072	110	1744	112	2.07	54.5	28/11	0.17	24/08	4.8	1.08	0.34
	2000	2159	114	1909	122	2.26	76.0	05/12	0.20	27/07	6.0	1.26	0.27
021026 Tima Water at Deephope C.A: 31.0 km^2	**73..95**	**1769**		**1366**		**1.34**	**100.0**	**30/10**	**0.03**	**26/07**	**3.4**	**0.61**	**0.07**
M.A: SEPA-E Local No: Sens.: 29.5 B/full: 80.0m^3s^{-1}								**1977**		**1984**			
F.A.R: N Level: 232m UE: <.01 FAI: 1.000													
Comment: Velocity-area station at natural river section. Control is gravel bed; unstable - sensitive to rearrangement of bed material (even in modest flows), frequent low flow gauging necessary to define rating. Natural flow regime. # High rainfall, steep, upland catchment developed on Silurian shale. Now mainly forested.	1996	1435	81	1122	82	1.10	39.0	26/10	0.04	23/09	3.1	0.46	0.05
	1997	1670	94	1397	102	1.37	52.5	19/02	0.10	19/08	3.5	0.50	0.12
	1998	1917	108	1670	122	1.64	41.0	20/10	0.09	26/05	4.3	0.86	0.19
	1999	1772	100	1441	105	1.42	50.5	28/11	0.10	24/08	3.5	0.57	0.15
	2000	1857	105	1676	123	1.64	62.2	24/10	0.06	28/07	4.7	0.76	0.11
021007 Ettrick Water at Lindean C.A: 499.0 km^2	**61..95**	**1386**		**941**		**14.89**	**560.0**	**31/10**	**0.57**	**07/09**	**34.3**	**8.62**	**1.92**
M.A: SEPA-E Local No: Sens.: 11.5 B/full: 300.0m^3s^{-1}								**1977**		**1976**			
F.A.R: S Level: 99m UE: <.01 FAI: 0.963													
Comment: Natural section with cableway about 1km before confluence with Tweed. Low flow control by d/s gravel riffle that is slowly accreting. St Mary's Loch and Megget Res. have a minor impact on the flow regime. Monthly naturalised flows available. # Relatively narrow impervious (mostly Silurian formations) catchment - typical of the Southern Uplands; land use is mostly hill grazing.	1996	1199	87	807	86	12.74	118.7	12/02	1.23	19/09	32.5	7.50	1.54
	1997	1391	100	966	103	15.29	333.8	19/02	2.05	05/10	34.6	7.98	2.86
	1998	1566	113	1169	124	18.50	173.5	02/11	2.40	26/05	35.7	15.08	3.85
	1999	1502	108	988	105	15.63	360.0	28/11	1.63	24/08	37.1	8.62	2.06
	2000	1638	118	1177	125	18.58	233.1	11/09	1.58	23/07	42.4	11.12	2.25
021006 Tweed at Boleside C.A: 1500.0 km^2	**61..95**	**1227**		**761**		**36.21**	**1019.0**	**31/10**	**3.46**	**27/08**	**79.2**	**23.43**	**6.86**
M.A: SEPA-E Local No: Sens.: 6.7 B/full: 808.0m^3s^{-1}								**1977**		**1976**			
F.A.R: SP Level: 95m UE: <.01 FAI: 0.975													
Comment: Velocity-area station with cableway on straight section with stable gravel bed. Seasonal weed growth affects rating. Reservoir storage modifies natural flow regime but overall impact is minor; monthly naturalised flows available. # Gauging site is central in Tweed basin and marks divide between hilly uplands and lowland areas. Geology: mainly impervious Silurian formations with significant Drift cover. Hill grazing with some forestry and a little arable land.	1996	1055	86	672	88	31.85	270.1	12/02	4.45	24/09	78.9	18.76	5.26
	1997	1207	98	770	101	36.63	554.3	19/02	7.27	05/10	79.0	21.51	9.27
	1998	1396	114	980	129	46.63	408.3	02/11	10.74	26/05	83.1	38.34	13.81
	1999	1366	111	866	114	41.21	579.2	28/11	6.53	06/09	91.2	25.16	8.64
	2000	1491	122	1033	136	48.99	407.2	25/10	6.37	23/07	102.8	34.09	7.82
021013 Gala Water at Galashiels C.A: 207.0 km^2	**64..95**	**953**		**547**		**3.59**	**171.2**	**03/11**	**0.24**	**22/08**	**8.0**	**2.28**	**0.51**
M.A: SEPA-E Local No: Sens.: 19.0 B/full: 180.0m^3s^{-1}								**1984**		**1995**			
F.A.R: N Level: 120m UE: <.01 FAI: 0.999													
Comment: Concrete-lined reach in industrial part of Galashiels. Gravel bed with control formed by concrete haunching over sewage pipe. # Natural upland catchment draining from the Moorfoot Hills. The catchment is mainly impervious (Silurian) and given over to hill grazing with some arable land.	1996	807	85	499	91	3.26	36.7	12/02	0.36	18/09	8.1	1.71	0.39
	1997	908	95	523	96	3.44	52.0	20/02	0.47	08/10	8.3	1.88	0.55
	1998	1118	117	751	137	4.93	64.0	02/11	1.12	25/05	10.1	3.39	1.52
	1999	958	101	536	98	3.52	45.0	05/11	0.52	15/09	8.0	2.17	0.63
	2000	1201	126	749	137	4.90	96.2	08/11	0.73	08/08	8.8	3.47	0.88

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
021015 Leader Water at Earlston C.A: 239.0 km^2 M.A: SEPA-E Local No: Sens.: 27.5 B/full: 120.0m^3s^{-1} F.A.R: N Level: 103m UE: <.01 FAI: 0.999 **Comment:** Velocity-area section. Gravel bed with bar giving low flow control. Fairly insensitive at low flows. Natural flow regime. # Upland catchment draining from the Lammermuir Hills. Geology: Silurian shale and ORS. Hill grazing with arable farming at lower levels.	**66..95**	**834**		**442**		**3.35**	**229.2**	**03/11 1984**	**0.25**	**18/08 1995**	**7.3**	**1.91**	**0.45**
	1996	750	90	431	98	3.26	54.1	18/12	0.38	16/09	8.6	1.54	0.39
	1997	793	95	412	93	3.12	42.0	30/06	0.47	05/10	7.6	1.69	0.52
	1998	1039	125	605	137	4.59	117.4	02/11	1.06	25/05	9.1	3.23	1.25
	1999	817	98	391	88	2.96	46.4	05/11	0.51	15/09	6.7	1.74	0.60
	2000	1072	129	627	142	4.74	92.0	07/11	0.66	23/07	9.3	2.95	0.81
021012 Teviot at Hawick C.A: 323.0 km^2 M.A: SEPA-E Local No: Sens.: 11.1 B/full: 134.0m^3s^{-1} F.A.R: N Level: 90m UE: <.01 FAI: 0.994 **Comment:** Natural section. Low flow control by gravel shoal below gauge. Frequent rerating required due to weed growth. # Natural upland catchment. Geology comprises of (mostly) Silurian shale. Hill grazing is the dominant land use but forestry is important in the headwaters. Hawick is the only significant settlement.	**63..95**	**1204**		**843**		**8.64**	**273.4**	**31/10 1977**	**0.44**	**24/07 1989**	**19.7**	**4.94**	**0.99**
	1996	1099	91	762	90	7.79	131.3	05/11	0.64	24/09	19.3	4.44	0.77
	1997	1217	101	850	101	8.71	**292.5**	**17/02**	1.08	19/08	19.3	4.16	1.48
	1998	1443	120	1050	125	10.75	159.2	24/10	1.67	26/05	23.3	7.48	2.43
	1999	1295	108	914	108	9.37	241.6	24/01	0.79	05/09	22.5	4.99	0.99
	2000	1409	117	1061	126	10.84	167.1	24/10	1.05	28/07	24.5	6.80	1.44
021025 Ale Water at Ancrum C.A: 174.0 km^2 M.A: SEPA-E Local No: Sens.: 16.6 B/full: 52.0m^3s^{-1} F.A.R: SP Level: 61m UE: <.01 FAI: 0.955 **Comment:** Velocity-area station at natural river section. Low flow control by solid rock bar very close to gauge. Runoff is marginally diminished by a small reservoir in the headwaters; monthly naturalised flows available. # An upland catchment - mostly Silurian shale. Hill pasture predominates.	**72..95**	**955**		**476**		**2.62**	**80.2**	**01/04 1992**	**0.10**	**17/08 1995**	**6.5**	**1.36**	**0.22**
	1996	881	92	429	90	2.36	36.0	12/02	0.19	24/09	6.2	1.13	0.20
	1997	967	101	493	104	2.72	59.3	17/02	0.25	05/10	6.3	1.29	0.36
	1998	1136	119	618	130	3.41	65.7	03/11	0.46	26/05	7.0	2.25	0.69
	1999	973	102	527	111	2.91	55.3	25/01	0.20	15/09	7.5	1.30	0.23
	2000	1169	122	669	141	3.68	62.5	11/09	0.25	22/07	8.2	2.30	0.36
021024 Jed Water at Jedburgh C.A: 139.0 km^2 M.A: SEPA-E Local No: Sens.: 10.2 B/full: 112.0m^3s^{-1} F.A.R: N Level: 66m UE: <.01 FAI: 0.996 **Comment:** Velocity-area station on straight reach. A rock ledge is the control for very low flows; under higher flow conditions control passes to d/s channel bar. Flows are largely natural and uncontrolled. # An upland, mainly Old Red Sandstone catchment. Land use: hill grazing with some forestry.	**71..95**	**916**		**516**		**2.27**	**167.1**	**03/11 1984**	**0.26**	**20/08 1995**	**5.2**	**1.18**	**0.39**
	1996	859	94	438	85	1.93	46.8	12/02	0.35	25/09	4.3	0.99	0.36
	1997	895	98	510	99	2.25	110.4	17/02	0.43	02/10	4.9	1.06	0.47
	1998	994	109	603	117	2.66	65.1	02/11	0.60	29/09	5.4	1.65	0.68
	1999	936	102	540	105	2.38	74.8	24/01	0.40	03/08	4.9	1.19	0.45
	2000	1122	122	699	135	3.07	51.0	12/12	0.46	27/07	6.5	1.85	0.56
021008 Teviot at Ormiston Mill C.A: 1110.0 km^2 M.A: SEPA-E Local No: Sens.: 8.4 B/full: 411.0m^3s^{-1} F.A.R: N Level: 43m UE: <.01 FAI: 0.989 **Comment:** Natural channel control. Rock and gravel section at gauge with d/s gravel riffle giving low flow control. Rating subject to appreciable weed growth. Catchment contains two small storages but runoff is sensibly natural. # Mainly Silurian shale and ORS. Land use: chiefly moorland and hill grazing with some arable farming towards the confluence with the Tweed.	**60..95**	***978***		**558**		**19.64**	**578.6**	**03/01 1982**	**1.41**	**31/08 1984**	**43.5**	**11.72**	**2.80**
	1996	883	90	485	87	17.03	260.8	12/02	1.78	22/09	41.2	9.29	2.39
	1997	954	98	573	103	20.16	505.0	17/02	3.01	06/10	48.5	11.13	3.80
	1998	1129	115	698	125	24.59	383.0	03/11	4.76	26/05	47.4	17.93	6.12
	1999	1002	102	562	101	19.79	438.3	25/01	2.27	05/09	46.9	11.03	2.70
	2000	1171	120	739	132	25.94	298.5	07/11	5.66	04/09	51.1	17.67	7.51
021021 Tweed at Sprouston C.A: 3330.0 km^2 M.A: SEPA-E Local No: Sens.: 6.6 B/full: 1600.0m^3s^{-1} F.A.R: SP Level: 25m UE: <.01 FAI: 0.984 **Comment:** Wide section on gentle bend in river. Natural channel controls. Cableway. Significant seasonal weed growth effects on rating. Reservoirs in the headwaters have a very minor impact on the flow regime; monthly naturalised flows available. # The geology is dominated by impervious Silurian formations (with some Drift). Hill grazing predominates with improved grassland and arable farming in the lower catchment.	**69..95**	**1038**		**600**		**63.40**	**1410.0**	**04/01 1982**	**6.34**	**02/09 1995**	**144.1**	**40.16**	**10.34**
	1996	927	89	535	89	56.38	577.7	12/02	8.09	24/09	136.5	33.97	9.60
	1997	1028	99	603	101	63.70	849.1	19/02	12.31	05/10	138.5	39.13	14.45
	1998	1220	118	800	133	84.47	829.7	03/11	17.99	26/05	154.6	67.22	25.30
	1999	1122	108	657	110	69.33	659.1	25/01	14.30	06/09	160.7	42.26	15.49
	2000	1288	124	842	140	88.62	772.0	07/11	12.34	23/07	174.4	65.39	14.93
021023 Leet Water at Coldstream C.A: 113.0 km^2 M.A: SEPA-E Local No: Sens.: 11.9 S/full: 3.0m^3s^{-1} F.A.R: N Level: 12m UE: <.01 FAI: 0.999 **Comment:** Velocity-area station with artificial control containing trapezoidal flume for low flow measurement. Backwater effects from bridge below station and R. Tweed. Natural flow regime. # A relatively flat (for this region) catchment developed on Boulder Clay overlying calciferous s'st. Mainly arable farming.	**70..95**	**650**		**231**		**0.83**	**51.7**	**01/04 1992**	**>0.00**	**27/08 1976**	**2.0**	**0.29**	**0.02**
	1996	586	90	179	77	0.64	20.3	04/12	0.01	19/09	1.4	0.25	0.02
	1997	609	94	197	85	0.71	17.1	11/12	0.03	04/10	2.0	0.19	0.04
	1998	853	131	386	167	1.38	51.3	03/11	0.16	26/05	2.9	0.75	0.21
	1999	663	102	220	95	0.79	17.0	12/12	0.04	12/08	1.8	0.37	0.06
	2000	854	131	369	160	1.32	39.2	07/11	0.06	22/07	2.6	0.58	0.09
021009 Tweed at Norham C.A: 4390.0 km^2 M.A: SEPA-E Local No: Sens.: 3.9 B/full: 1300.0m^3s^{-1} F.A.R: SP Level: 4m UE: <.01 FAI: 0.986 **Comment:** Lowest station on R. Tweed. Velocity-area station at very wide natural section. Complex control. Moderate seasonal weed growth effects on rating. Reservoirs in headwaters have only a small impact on the flow regime - monthly naturalised flows available. # Geology: mixed but principally impervious Palaeozoic formations. Moorland and hill pasture predominates; improved grasslands and arable farming below Melrose.	**62..95**	**993**		**559**		**77.86**	**1518.0**	**04/01 1982**	**7.43**	**28/08 1976**	**167.0**	**51.20**	**14.10**
	1996	861	87	485	87	67.38	694.9	12/02	9.43	25/09	162.1	43.50	11.48
	1997	955	96	541	97	75.37	953.3	19/02	13.60	06/10	174.6	47.74	16.65
	1998	1178	119	729	130	101.42	1065.0	03/11	22.29	26/05	187.8	80.25	30.94
	1999	1041	105	607	109	84.44	778.2	25/01	14.74	11/08	191.2	52.44	17.82
	2000	1211	122	754	135	104.72	1193.0	08/11	12.94	25/07	209.9	79.89	17.04
021027 Blackadder Water at Mouth Bridge C.A: 159.0 km^2 M.A: SEPA-E Local No: Sens.: 15.5 B/full: 21.0m^3s^{-1} F.A.R: N Level: 57m UE: <.01 FAI: 0.996 **Comment:** Velocity-area station. Natural river section with rock control. Moderate seasonal weed growth effects rating. Natural flow regime. # Natural catchment. Grazing on hills, arable on lower land. Mostly Old Red S'st and calciferous s'st overlain by Boulder Clay.	**73..95**	**751**		**333**		**1.68**	**94.1**	**31/03 1992**	**0.14**	**21/08 1995**	**3.4**	**0.96**	**0.26**
	1996	679	90	308	92	1.55	49.2	03/12	0.22	25/09	3.2	0.92	0.23
	1997	716	95	299	90	1.51	27.2	11/12	0.27	05/10	3.3	0.76	0.31
	1998	977	130	513	154	2.59	92.7	02/11	0.69	25/05	4.8	1.76	0.78
	1999	743	99	327	98	1.65	24.1	24/01	0.32	10/08	3.3	1.06	0.37
	2000	979	130	484	145	2.44	83.0	06/11	0.34	22/07	4.0	1.41	0.43
021022 Whiteadder Water at Hutton Castle C.A: 503.0 km^2 M.A: SEPA-E Local No: Sens.: 7.2 S/full: 175.0m^3s^{-1} F.A.R: SP Level: 29m UE: <.01 FAI: 0.988 **Comment:** Compound Crump profile weir with theoretical rating. Catchment contains Whiteadder and Watchwater Reservoirs which can have substantial effects. Extremely low winter flows in 1973 (e.g. 26/11) due to river icing over during freezing conditions. Monthly naturalised flows available. # Mixed geology, mostly impervious Palaeozoic formations with significant Drift cover. Hill grazing at high levels with arable farming below about 150m.	**69..95**	**787**		**387**		**6.17**	**279.8**	**03/11 1984**	**0.42**	**26/11 1973**	**12.8**	**3.52**	**1.09**
	1996	720	91	373	96	5.94	151.9	03/12	0.88	21/09	13.8	3.72	0.93
	1997	786	100	382	99	6.09	129.6	01/07	1.02	05/10	13.8	3.16	1.22
	1998	1046	133	604	156	9.63	258.2	02/11	2.48	25/05	18.1	6.70	3.00
	1999	771	98	351	91	5.60	93.4	20/04	1.34	10/08	11.2	3.76	1.47
	2000	1049	133	558	144	8.87	**284.5**	**07/11**	1.36	22/07	14.5	5.01	1.67
021016 Eye Water at Eyemouth Mill C.A: 119.0 km^2 M.A: SEPA-E Local No: Sens.: 23.8 B/full: 92.0m^3s^{-1} F.A.R: N Level: 3m UE: <.01 FAI: 0.998 **Comment:** Former mill weir converted to serve as informal control. Steep high banks on both sides. 600m u/s from Eyemouth harbour; high spring tides can reach site. # Geology: Silurian shale and ORS with tracts of Drift. Agriculture is the primary land use; hill grazing in the headwaters, arable below.	**67..95**	**698**		**323**		**1.22**	**88.6**	**02/10 1981**	**0.04**	**17/08 1995**	**2.7**	**0.57**	**0.12**
	1996	617	88	246	76	0.93	26.6	03/12	0.09	19/08	2.1	0.47	0.12
	1997	757	108	342	106	1.29	58.4	01/07	0.16	02/10	3.1	0.50	0.19
	1998	946	136	462	143	1.74	28.2	03/04	0.32	24/05	3.8	1.12	0.45
	1999	685	98	254	79	0.96	26.7	24/01	0.14	12/08	1.9	0.59	0.18
	2000	886	127	431	133	1.62	54.2	28/08	0.20	21/07	2.9	0.80	0.24

Map 3: SEPA — WEST



Area: 20,525 km^2

Average Rainfall (1961–90): 1603 mm

Gauging Station Register

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m³s⁻¹)	Min. mon. flow (m³s⁻¹)	Month/Year of min.	Median ann. flood (m³s⁻¹)	Base Flow Index	10 Percentile (m³s⁻¹)	95 Percentile (m³s⁻¹)
077003	Liddel Water	Rowanburnfoot	NY	415759	319.0	VA	1973–00	1415	1011	404	1291	85	743	76	10.23	0.84	08/95	260.6	.32	25.5	1.06
077002	Esk	Canonbie	NY	397751	495.0	VA	1962–00	1502	1104	398	1430	98	645	73	17.33	1.27	07/84	360.3	.38	40.7	2.15
077004	Kirtle Water	Mossknowe	NY	285693	72.0	VA	1979–00	1261	781	480	964	98	552	89	1.78	0.09	08/84		.31	4.5	0.13
078006	Annan	Woodfoot	NT	099010	217.0	VA	1983–00	1711	1315	396	1577	86	1129	89	9.05	0.59	08/84		.42	21.4	0.97
078004	Kinnel Water	Redhall	NY	077868	76.1	VA	1963..00	1500	1140	360	1457	86	625	73	2.75	0.05	07/84	69.4	.28	7.1	0.13
078005	Kinnel Water	Bridgemuir	NY	091845	229.0	VA	1979–00	1542	1103	439	1295	00	895	89	8.01	0.39	08/84	128.9	.37	19.2	0.69
078001 *	Annan	Saint Mungo's	NY	125755	730.3	VA	1958–61	1403	922	481	1090	60	835	59	21.34	3.22	09/59		.42	55.7	2.61
078003	Annan	Brydekirk	NY	191704	925.0	VA	1967–00	1388	1009	379	1335	98	559	73	29.61	1.95	07/84	296.5	.44	69.8	3.46
079007	Lochar Water	Kirkblain Bridge	NY	026695	125.0	VA	1992..99	1115	616	499	704	98	489	93	2.44	0.34	04/97		.51	5.8	0.38
079001 *	Afton Water	Afton Reservoir	NS	631050	8.5	TP	1965..81	2209	735	1474	1109	77	293	73	0.20	>0.00	12/71		.10	0.6	0.01
079003	Nith	Hall Bridge	NS	684129	155.0	VA	1959–00	1656	1167	489	1599	90	673	71	5.73	0.23	08/95	75.9	.28	15.7	0.35
079006	Nith	Drumlanrig	NX	858994	471.0	VA	1967–00	1606	1146	460	1488	94	718	71	17.12	0.84	08/84	315.7	.34	44.2	1.38
079004	Scar Water	Capenoch	NX	845940	142.0	VA	1963–00	1719	1238	481	1599	00	787	73	5.57	0.16	08/95	148.5	.32	14.0	0.32
079002	Nith	Friars Carse	NX	923851	799.0	VA	1957–00	1552	1081	471	1397	00	681	71	27.38	1.54	08/84	454.0	.39	67.3	2.77
079005	Cluden Water	Fiddlers Ford	NX	928795	238.0	VA	1963–00	1456	1055	401	1488	00	614	73	7.96	0.25	08/84	109.3	.38	19.5	0.52
080001	Urr	Dalbeattie	NX	822610	199.0	VA	1963–00	1354	938	416	1325	82	493	73	5.92	0.09	08/95	102.2	.36	15.0	0.25
080004	Green Burn	Loch Dee	NX	481791	2.6	VA	1983–00	2637	2377	260	3081	98	1904	84	0.20	>0.00	08/95		.18	0.6	0.01
080003	White Laggan	Loch Dee	NX	468781	5.7	VA	1980–00	2670	2296	374	2705	98	1804	89	0.41	0.01	05/84	8.8	.19	1.1	0.02
080005	Dargall Lane	Loch Dee	NX	451787	2.1	VA	1983–00	2580	2538	42	3274	98	1952	89	0.17	0.01	08/95		.28	0.4	0.01
080006	Blackwater	Loch Dee	NX	478797	15.6	VA	1983..00	2610	2450	160	2943	98	1953	89	1.21	0.05	08/95		.47	2.7	0.09
080002	Dee	Glenlochar	NX	733641	809.0	VA	1977–00	1915	1634	281	2026	00	1358	96	41.93	2.06	08/84		.41	103.2	3.67
081007	Water of Fleet	Rusko	NX	592590	77.0	VA	1988–00	1918	1448	470	1724	98	1124	89	3.54	0.10	08/95		.28	8.8	0.23
081006	Minnoch Wtr	Minnoch Bridge	NX	363746	141.0	VA	1986–00	2269	1772	497	2032	98	1342	89	7.92	0.20	06/92		.28	19.7	0.50
081002	Cree	Newton Stewart	NX	412653	368.0	VA	1963–00	1822	1350	472	1663	00	854	71	15.75	0.43	05/80	225.0	.28	39.3	0.95
081004	Bladnoch	Low Malzie	NX	382545	334.0	VA	1977–00	1415	964	451	1182	88	694	89	10.21	0.11	08/95		.34	26.2	0.40
081001 *	Penwhirn Brn	Penwhirn Res	NX	128694	18.2	TP	1965–68	1556	891	665	995	67	962	66	0.51	0.09	07/66		.22	1.5	0.07
081003	Luce	Airythemming	NX	180599	171.0	VA	1967–00	1509	1125	384	1460	98	681	71	6.10	0.19	07/84	155.1	.23	16.5	0.29
081005	Piltanton Brn	Barsolus	NX	107564	34.2	VA	1985–00	1172	701	471	871	87	479	95	0.76	0.05	08/95		.39	1.9	0.06
082003	Stinchar	Balnowlart	NX	108832	341.0	VA	1973..00	1640	1013	627	1261	82	577	75	10.95	0.30	08/76	196.6	.32	26.5	0.55
082001	Girvan	Robstone	NX	217997	245.5	VA	1963..00	1408	845	563	1149	98	542	73	6.58	0.20	08/95	87.1	.34	16.4	0.47
082002	Doon	Auchendrane	NS	338160	323.8	VA	1974–00	1701	731	970	852	99	542	76	7.51	2.27	06/89		.57	15.6	2.71
083003	Ayr	Catrine	NS	525259	166.3	VA	1970–00	1354	975	379	1282	90	677	96	5.14	0.41	08/84	128.2	.30	13.2	0.55
083004	Lugar Water	Langholm	NS	508217	181.0	VA	1972–00	1341	1000	341	1348	90	659	76	5.74	0.25	07/76	150.0	.26	15.3	0.32
083006	Ayr	Mainholm	NS	361216	574.0	VA	1976–00	1309	869	440	1089	00	562	96	15.82	1.15	08/83	251.1	.30	41.5	1.45
083010	Irvine	Newmilns	NS	532372	72.8	FV	1977..00	1486	1054	432	1299	98	656	96	2.43	0.16	08/95		.28	6.4	0.21
083013	Irvine	Kilmarnock	NS	430369	218.0	B	1982..00	1339	959	380	1205	90	527	96	6.63	0.19	08/95		.25	16.8	0.31
083005	Irvine	Shewalton	NS	345369	380.7	VA	1972..00	1277	804	473	1028	92	522	96	9.71	0.33	08/95	215.3	.27	25.5	0.50
083008	Annick Water	Dreghorn	NS	352384	90.6	VA	1980..00	1442	1260	182	1772	90	955	83	3.62	0.11	08/84		.30	8.8	0.25
083002 *	Garnock	Dalry	NS	293488	88.8	VA	1963–77	1656	980	676	1214	66	701	69	2.76	0.16	04/74	54.6	.22	7.3	0.16
083009	Garnock	Kilwinning	NS	307424	183.8	VA	1978–00	1665	1128	537	1478	98	832	89	6.57	0.15	07/84		.23	16.6	0.27
083007	Lugton Water	Eglinton Castle	NS	315420	54.6	B VA	1977–00	1442	1006	436	1302	98	773	97	1.74	0.08	06/84		.26	4.6	0.09
084022	Duneaton	Maidencots	NS	929259	110.3	VA	1966..00	1408	899	509	1208	94	578	73	3.14	0.22	07/84		.43	7.4	0.45
084004	Clyde	Sills of Clyde	NS	927424	741.8	VA	1957..00	1273	806	467	1165	00	454	73	18.95	2.07	09/96	198.5	.51	42.2	3.51
084037	Douglas Water	Happendon	NS	855333	97.0	C	1989..00	1421	911	510	1077	92	599	96	2.80	0.30	09/96		.43	6.9	0.41
084018	Clyde	Tulliford Mill	NS	891404	932.6	VA	1969–00	1266	878	388	1174	99	504	73	25.95	2.51	08/76	239.8	.51	59.5	4.16
084009	Nethan	Kirkmuirhill	NS	809429	68.0	CC	1966..00	1248	776	472	1099	98	522	69	1.62	0.12	08/95	38.7	.36	4.0	0.17
084003	Clyde	Hazelbank	NS	835452	1092.9	VA	1956..00	1211	804	407	1144	90	462	73	27.86	2.92	09/96	271.9	.50	62.4	5.31
084031 *	Watstone Brn	Watstone	NS	763470	5.0	C	1986–93	1148	132	1016	240	91	63	87	0.02	>0.00	06/92		.32	0.0	>0.00
084029	Cander Water	Candermill	NS	765471	24.5	VA	1975..00	1092	743	349	1036	90	444	96	0.58	0.03	08/84		.30	1.5	0.05
084014	Avon Water	Fairholm	NS	755518	265.5	VA	1964..00	1303	923	380	1226	90	582	96	7.77	0.27	08/95	188.1	.27	20.3	0.50
084007	S Calder Wtr	Forgewood	NS	751585	93.0	CC	1965..00	971	669	302	986	98	417	73	1.97	0.55	09/96	21.2	.60	3.8	0.70
084005	Clyde	Blairston	NS	704579	1704.2	VA	1958..00	1184	790	394	1088	90	501	73	42.67	4.54	08/84	382.8	.45	100.4	7.74
084024	N Calder Wtr	Hillend	NS	828678	19.9	FV	1972..00	1119	561	558	796	98	236	73	0.35	0.09	05/91		.64	0.8	0.10
084027	N Calder Wtr	Calderbank	NS	765624	60.6	MIS	1968..00	1039	540	499	1063	99	254	72	1.04	0.01	06/77		.33	2.4	0.02
084019	N Calder Wtr	Calderpark	NS	681625	129.8	VA	1963..00	1012	601	411	921	92	355	73	2.47	0.10	08/95	39.1	.47	5.4	0.54
084008	Rotten Calder	Redlees	NS	679604	51.3	CC	1966–00	1236	974	262	1721	99	579	69	1.58	0.12	06/68	30.0	.33	4.1	0.17
084013	Clyde	Daldowie	NS	672616	1903.1	VA	1963–00	1170	807	363	1167	00	512	73	48.68	8.57	08/84	391.5	.46	112.6	9.76
084016	Luggie Water	Condorrat	NS	739725	33.9	CB	1966..00	1115	829	286	1132	98	501	72	0.89	0.12	09/96	21.6	.40	2.0	0.14
084025	Luggie Water	Oxgang	NS	666734	87.7	VA	1975..00	1123	896	227	1263	98	592	75	2.49	0.21	07/84	26.3	.42	5.8	0.35
084023	Bothlin Burn	Auchengeich	NS	680717	35.7	C	1973..00	1065	700	365	900	98	489	89	0.79	0.12	07/84	11.2	.51	1.8	0.16
084006 *	Kelvin	Bridgend	NS	672749	63.7	VA	1963..83	1304	981	323	1604	82	538	72	1.98	0.22	10/72	15.8	.44	4.6	0.30
084020	Glazert Water	Milton of Campsie	NS	656763	51.9	VA	1968..00	1629	1257	372	1754	98	824	72	2.07	0.09	07/84	58.1	.31	5.1	0.17
084015	Kelvin	Dryfield	NS	638739	235.4	VA	1960..99	1316	919	397	1389	98	537	72	6.86	0.80	10/72	61.8	.44	15.6	1.21
084026	Allander Wtr	Milngavie	NS	558738	32.8	FVVA	1974..00	1558	1299	259	1675	94	878	97	1.35	0.07	08/76	32.8	.36	3.2	0.12
084001	Kelvin	Killermont	NS	558705	335.1	VA	1948..00	1271	795	476	1231	54	521	59	8.44	1.36	05/84	95.6	.43	19.4	1.68
084036	Earn Water	Letham	NS	567549	19.8	VA	1991..00	1648	1413	235	1808	98	1038	97	0.89	0.05	07/00		.34	2.1	0.05
084035	Kittoch Water	Waterside	NS	596562	16.8	VA	1991–00	1319	1181	138	1415	99	792	96	0.63	0.06	05/00		.35	1.4	0.08
084030	Wht Cart Wtr	Overlee	NS	579575	111.8	MIS	1981..00	1500	1022	478	1277	90	638	96	3.62	0.22	08/99		.32	9.4	0.40
084021 *	Wht Cart Wtr	Netherlee	NS	587597	91.6	MIS	1969..74	1174	1495		2084	70	1900	71	4.34	0.18	08/74		.50	13.6	1.69
084033	Wht Cart Wtr	MacQuisten Br	NS	568614	120.0	VA	1991–00	1479	982	497	1148	94	708	97	3.74	0.25	08/96		.32	9.1	0.34
084034	Auldhouse Brn	Spiers Bridge	NS	544589	17.2	VA	1991–00	1498	526	972	660	94	369	96	0.29	0.07	08/96		.47	0.6	0.07
084032 *	Bagabout Brn	Giffnock	NS	556596	4.9	TP	1984..97	1228	615	613	942	95	423	96	0.10	>0.00	07/84		.25	0.3	>0.00
084012	Wht Cart Wtr	Hawkhead	NS	499629	234.9	VA	1963–00	1325	911	414	1229	90	593	69	6.79	0.40	08/95	123.5	.35	17.2	0.81
084002	Calder	Muirshiel	NS	309638	12.4	TP	1952..99	2210	1643	567	2235	61	1101	69	0.65	0.05	04/74	16.3	.15	1.8	0.03
084017	Blk Cart Wtr	Milliken Park	NS	411620	103.1	VA	1967–00	1804	1454	350	1935	98	796	72	4.75	0.21	06/78	27.7	.37	12.3	0.42
085003	Fatloch	Glen Falloch	NN	321197	80.3	VA	1970..00	3005	2360	645	3364	99	1744	72	6.01	0.13	05/80	154.6	.16	16.9	0.24
085004	Luss Water	Luss	NS	356929	35.3	B VA	1976..00	2502	2431	71	2946	86	2075	97	2.72	0.14	05/80		.29	7.0	0.19
085002	Endrick Wtr	Gaidrew	NS	485866	219.9	VA	1963..00	1519	1059	460	1381	94	677	69	7.38	0.41	08/83	119.2	.30	19.2	0.62
085001	Leven	Linnbrane	NS	394803	784.3	VA	1963..00	2124	1756	368	2175	98	1235	69	43.67	4.55	08/84	104.8	.76	85.4	8.26
086002 *	Eachaig	Eckford	NS	140843	139.9	VA	1968..98	2540	2608		4340	94	1660	71	11.57	0.50	05/80	80.0	.39	27.7	0.88

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
086001	Little Eachaig	Dalinlongart	NS	143821	30.8	VA	1968..00	2419	1807	612	2756	99	1001	69	1.76	0.05	05/80	53.1	.23	4.8	0.09
089002	Linne nam Be'	Victoria Br	NN	272422	50.5	VA	1981..00	3133	3022	111	3648	92	2294	87	4.84	0.19	06/82		.16	12.4	0.18
089003	Orchy	Glen Orchy	NN	239310	251.2	VA	1977..00	2784	2864		3700	83	1848	77	22.81	0.90	05/80		.23	59.0	1.29
089005	Lochy	Inverlochy	NN	197274	47.7	B	1978..00	3075	2631	444	3216	98	2122	87	3.98	0.25	05/80		.25	10.6	0.35
089008 *	Eas Daimh	Eas Daimh	NN	239276	4.5	C	1981..92	3326	3210	116	3861	90	2663	84	0.46	0.05	05/84		.29	1.2	0.04
089009 *	Eas a' Ghaill	Succoth	NN	209265	9.7	C	1981..93	3041	2399	642	2828	90	1993	87	0.74	0.05	05/84		.20	2.0	0.04
089004	Strae	Glen Strae	NN	146294	36.2	B	1978..00	2939	2571	368	3016	92	2048	87	2.95	0.13	05/80		.24	7.6	0.20
089007	Abhainn A Bhe'	Braevallich	NM	957076	24.1	CB	1981..00	2811	2329	482	2876	91	1947	96	1.78	0.08	05/84		.23	4.5	0.12
089006	River Avich	Barnaline Lodge	NM	971139	32.1	CB	1980..00	2627	1918	709	2265	90	1539	96	1.95	0.17	06/97		.54	4.3	0.24
090002 *	Creran	Taraphocain	NN	019468	66.1	VA	1977–81	2801	2275	526	2588	80	1434	78	4.77	0.21	05/80		.20	12.1	0.27

Hydrometric Statistics

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
077003	**Liddel Water at Rowanburnfoot** C.A: 319.0 km^2	**73..95**	**1413**		**1002**		**10.14**	**404.4**	**01/01**	**0.62**	**26/07**	**25.2**	**4.94**	**1.04**
M.A: SEPA-W	Local No: 125 Sens.: 8.8 B/full: 250.0m^3s^{-1}								**1991**		**1984**			
F.A.R: N	Level: 27m UE: <.01 FAI: 1.000													
Comment: Velocity-area station on straight gravel bedded reach. Gravel shoal gives low flow control. Cableway. Highest floods overtop right hand floodbank. Natural flow regime. # Geology: Silurian shales, often with peat cover, form the hills; Lower Carboniferous series overlain by Boulder Clay in the valleys. Land use: dairy and hill farming with some forestry.		1996	1170	83	832	83	8.39	278.6	05/11	**0.52**	**20/09**	20.3	4.05	0.82
		1997	1266	90	954	95	9.65	**447.5**	**17/02**	1.08	20/08	24.1	3.94	1.35
		1998	1582	112	1206	120	12.20	290.1	20/10	1.30	26/05	30.1	7.64	1.71
		1999	1500	106	1030	103	10.42	293.8	25/01	1.08	15/09	25.0	4.93	1.27
		2000	1614	114	1250	125	12.61	268.5	25/10	1.18	28/07	31.2	6.77	1.49
077002	**Esk at Canonbie** C.A: 495.0 km^2	**62..95**	**1490**		**1088**		**17.08**	**648.3**	**31/10**	**1.03**	**19/06**	**40.2**	**9.48**	**2.13**
M.A: SEPA-W	Local No: 124 Sens.: 8.0 B/full: 400.0m^3s^{-1}								**1977**		**1978**			
F.A.R: SP	Level: 22m UE: <.01 FAI: 0.994													
Comment: Velocity-area station located on straight reach with natural channel control. Cableway. Steep bed, not high banks but all bar highest floods contained. Gravel bed. Black Esk Res. impounds about 1% of flows for export. # Natural upland catchment area around Eskdalemuir.		1996	1344	90	926	85	14.49	254.9	05/11	1.23	23/09	35.4	8.15	1.47
		1997	1454	98	1085	100	17.03	577.2	17/02	2.22	22/07	40.1	8.68	3.06
		1998	1791	120	1430	131	22.45	339.3	20/10	2.51	26/05	47.6	15.26	4.11
		1999	1611	108	1203	111	18.88	297.9	25/01	1.91	05/09	43.5	10.74	2.58
		2000	1796	121	1423	131	22.28	441.7	25/10	2.04	28/07	48.1	13.97	3.56
077004	**Kirtle Water at Mossknowe** C.A: 72.0 km^2	**79..95**	**1246**		**780**		**1.78**	**195.6**	**11/03**	**0.05**	**24/08**	**4.5**	**0.80**	**0.13**
M.A: SEPA-W	Local No: 123 Sens.: 17.8 B/full: 50.0m^3s^{-1}								**1979**		**1984**			
F.A.R: N	Level: 21m UE: FAI:													
Comment: Velocity-area station with cableway. Sited on straight reach above fall over rock bar acting as control. Natural flow regime. # Silurian shales of the upper catchment give way briefly to the Carboniferous series, then to Triassic s'sts in the lower catchment, generally overlain by Boulder Clay. Land use: mixed dairy and hill farming.		1996	1071	86	628	81	1.43	50.2	05/11	0.07	20/09	3.6	0.64	0.10
		1997	1172	94	651	83	1.49	51.5	17/02	0.09	22/07	3.7	0.60	0.17
		1998	1461	117	964	124	2.20	62.7	24/10	0.17	26/05	5.2	1.24	0.27
		1999	1273	102	756	97	1.73	50.0	03/12	0.14	15/09	4.3	0.84	0.18
		2000	1545	124	943	121	2.15	71.9	25/10	0.12	29/07	5.4	1.08	0.19
078006	**Annan at Woodfoot** C.A: 217.0 km^2	**83..95**	**1678**		**1309**		**9.01**	**166.9**	**11/12**	**0.43**	**26/08**	**21.5**	**5.05**	**0.91**
M.A: SEPA-W	Local No: 121 Sens.: 9.9 B/full: 120.0m^3s^{-1}								**1994**		**1984**			
F.A.R: N	Level: 82m UE: FAI:													
Comment: Velocity area station. Cableway span 52m. Good approach, steep lb. Cableway spans immediate rb and subsidiary flood bank. Responsive, natural catchment. # High relief upland catchment draining Silurian slates, shales and mudstones. Appreciably Drift free; valleys with Boulder Clay and alluvium, sands and gravels near the station.		1996	1533	91	1153	88	7.91	132.6	26/10	0.53	21/09	20.0	4.55	0.69
		1997	1677	100	1266	97	8.71	151.4	17/02	1.20	26/08	21.8	4.02	1.42
		1998	1865	111	1457	111	10.02	138.0	20/10	1.42	26/05	20.5	7.31	1.87
		1999	1914	114	1324	101	9.11	158.2	28/11	0.98	24/08	20.6	5.30	1.35
		2000	2000	119	1473	113	10.11	145.8	25/10	0.84	28/07	23.9	5.88	1.28
078004	**Kinnel Water at Redhall** C.A: 76.1 km^2	**63..95**	**1477**		**1113**		**2.69**	**110.9**	**30/10**	**0.03**	**21/08**	**6.9**	**1.19**	**0.12**
M.A: SEPA-W	Local No: 119 Sens.: 31.2 B/full: 170.0m^3s^{-1}								**1977**		**1984**			
F.A.R: N	Level: 54m UE: <.01 FAI: 0.999													
Comment: Velocity-area station located in straight gravel-bedded reach. Informal concrete low-flow control installed in 1966 - good hydraulic performance. Downstream gravel had a short-term impact on modularity. # Geology: Silurian shales in upper catchment; Triassic sandstone aquifer in lower catchment. Predominantly hill pasture.		1996	1487	101	1170	105	2.82	89.7	26/10	0.03	20/09	7.7	1.07	0.09
		1997	1557	105	1209	109	2.92	97.1	18/11	0.07	22/07	8.1	1.00	0.17
		1998	1779	120	1457	131	3.52	95.6	20/10	0.17	27/05	8.1	2.07	0.30
		1999	1614	109	1326	119	3.20	80.1	28/11	0.20	24/08	8.1	1.45	0.39
		2000	1768	120	1410	127	3.39	93.8	25/10	0.07	23/07	8.8	1.68	0.21
078005	**Kinnel Water at Bridgemuir** C.A: 229.0 km^2	**79-95**	**1537**		**1089**		**7.91**	**157.6**	**22/09**	**0.29**	**25/08**	**19.1**	**4.16**	**0.66**
M.A: SEPA-W	Local No: 120 Sens.: 12.4 B/full: 120.0m^3s^{-1}								**1985**		**1984**			
F.A.R: N	Level: 45m UE: <.01 FAI: 0.997													
Comment: Velocity-area station on small channel at well confined section. Large bend u/s but straight at gauge. Natural channel control. Cableway. # Silurian shales in upper catchment; Triassic s'st aquifer in lower catchment. Natural catchment supporting hill pasture and forestry (Drains Forest of Ae).		1996	1397	91	1056	97	7.65	114.1	27/10	0.37	21/09	21.2	3.72	0.49
		1997	1463	95	998	92	7.25	152.6	18/11	0.66	22/07	18.8	2.99	0.85
		1998	1694	110	1286	118	9.34	140.7	20/10	0.94	27/05	19.6	6.30	1.45
		1999	1532	100	1135	104	8.24	129.4	28/11	0.99	24/08	18.8	4.47	1.48
		2000	1698	110	1298	119	9.40	146.9	25/10	0.67	25/07	23.2	5.59	1.06
078003	**Annan at Brydekirk** C.A: 925.0 km^2	**67..95**	**1368**		**982**		**28.81**	**499.1**	**31/10**	**1.35**	**23/07**	**68.5**	**16.99**	**3.36**
M.A: SEPA-W	Local No: 122 Sens.: 7.3 B/full: 420.0m^3s^{-1}								**1977**		**1984**			
F.A.R: N	Level: 10m UE: <.01 FAI: 0.992													
Comment: Velocity-area station with cableway located on straight section below bend and with slightly curving channel below. # Silurain shales in the north; Carboniferous series in the south. Centre of catchment is dominated by Triassic sandstone aquifer of the Lochmaben basin, with a smaller ribbon aquifer extending up the valley to Moffat. Natural agricultural catchment.		1996	1325	97	1024	104	29.94	251.4	10/02	2.05	22/09	70.8	17.23	2.57
		1997	1398	102	1012	103	29.67	325.2	17/02	3.69	22/07	72.0	14.45	4.77
		1998	1641	120	1336	136	39.20	275.1	21/10	5.07	27/05	81.6	29.79	7.36
		1999	1498	110	1146	117	33.62	338.3	28/11	4.29	24/08	82.1	20.34	5.72
		2000	1658	121	1320	134	38.62	350.1	25/10	3.46	27/07	84.9	25.52	4.77
079007	**Lochar Water at Kirkblain Bridge** C.A: 125.0 km^2	**92..95**	**1068**		**556**		**2.20**	**20.2**	**02/12**	**0.27**	**01/08**	**5.4**	**1.25**	**0.36**
M.A: SEPA-W	Local No: Sens.: B/full: 20.0m^3s^{-1}								**1992**		**1992**			
F.A.R: N	Level: m UE: FAI:													
Comment: VA station, natural channel control. Short, straight reach below sharp bend and road bridge. Flood flows contained by bridge used for gauging. Muddy bed. Summer flows badly affected by weed growth. River management scheme and tides affect flow regime (river dredged to beyond tidal limit, treat 1997 flows with extreme caution). HIF record dubious, frequent gaugings undertaken to enable recalibration. # Natural low lying catchment draining Lochar Moss, overlying Permian s'st aquifer. Headwaters drain Silurian shales. Land use: mixed farming and pasture.		1996	1064	100	685	123	2.71	17.9	12/02	0.15	24/06	6.9	1.52	0.32
		1997	1101	103	615	111	2.44	17.1	17/02	0.23	01/05	6.1	1.80	0.24
		1998	1299	122	704	127	2.79	16.2	20/10	0.54	26/05	5.8	1.81	0.67
		1999	1183	111	639	115	2.53	18.5	29/11	0.64	18/06	5.6	1.30	0.72
		2000	1354	127	713	128	2.82	12.0						

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
079003	**Nith at Hall Bridge** C.A: 155.0 km^2	**59..95**	**1647**		**1143**		**5.62**	**212.4**	**15/01 1962**	**0.12**	**23/08 1995**	**15.4**	**2.42**	**0.34**
M.A: SEPA-W	Local No: 118 Sens.: 33.2 B/full: 100.0m^3s^{-1}													
F.A.R: SP	Level: 173m UE: <.01 FAI: 0.986													
Comment: Velocity-area station. All flows contained by bridge opening below station which is likely high flow control. Low flows controlled by riffles near bridge. Straight and uniform approach. Largely natural with controlled storage of Afton Res. having occasional signif. effect. # Geology: Silurian shales and Coal Measures. Upland catchment supporting pasture and rough grazing.		1996	1378	84	999	87	4.90	53.8	10/02	0.19	18/09	15.8	1.66	0.29
		1997	1500	91	1074	94	5.28	82.9	18/11	0.33	26/08	15.0	1.98	0.40
		1998	1896	115	1517	133	7.45	65.0	24/10	0.51	27/05	18.5	3.93	0.67
		1999	1881	114	1546	135	7.60	81.9	22/12	0.52	24/08	21.8	3.34	0.64
		2000	1937	118	1559	136	7.64	80.6	09/03	0.25	26/07	20.6	3.40	0.39
079006	**Nith at Drumlanrig** C.A: 471.0 km^2	**67..95**	**1589**		**1128**		**16.84**	**538.4**	**18/10 1982**	**0.61**	**26/08 1984**	**43.4**	**8.24**	**1.35**
M.A: SEPA-W	Local No: 117 Sens.: 6.0 B/full: 300.0m^3s^{-1}													
F.A.R: SPN	Level: 52m UE: <.01 FAI: 0.995													
Comment: Velocity-area station on long straight reach at particularly well confined site. Cableway. Gravel and rock bed. Natural channel control. Sensibly natural flow regime. Afton Reservoir has small influence. # Geology: Silurian shales and mudstones. Mixed farming and pasture in valley bottom; rough grazing, moorland and forestry in upland areas.		1996	1397	88	1003	89	14.93	215.3	05/11	0.71	21/09	44.2	7.40	1.04
		1997	1534	97	1075	95	16.06	494.6	19/02	1.33	22/07	42.7	6.90	1.67
		1998	1825	115	1353	120	20.21	370.7	20/10	1.62	27/05	46.0	13.10	2.62
		1999	1824	115	1391	123	20.77	384.7	23/12	1.37	24/08	54.6	10.70	2.04
		2000	1905	120	1462	130	21.78	332.3	25/10	0.95	27/07	55.2	11.43	1.58
079004	**Scar Water at Capenoch** C.A: 142.0 km^2	**63..95**	*1687*		**1217**		**5.48**	**232.1**	**30/10 1977**	**0.08**	**26/08 1976**	**13.6**	**2.70**	**0.31**
M.A: SEPA-W	Local No: 116 Sens.: 16.9 B/full: 187.0m^3s^{-1}													
F.A.R: N	Level: 49m UE: <.01 FAI: 0.999													
Comment: Velocity-area station with cableway. Control of pre-cast concrete sections installed during winter of 1986/7 replacing earlier 1981 gabion control. Fairly straight gravel bedded reach. Well confined for all but extreme flows. # Geology: Silurian shales and mudstones. Natural catchment supporting hill pasture.		1996	1657	98	1169	96	5.25	100.4	05/11	0.17	21/09	14.6	2.40	0.22
		1997	1782	106	1224	101	5.51	149.9	19/02	0.33	22/07	14.7	2.26	0.47
		1998	2012	119	1452	119	6.54	146.5	20/10	0.42	27/05	15.2	3.96	0.80
		1999	2050	122	1446	119	6.51	163.9	28/11	0.35	24/08	15.6	3.11	0.61
		2000	2200	130	1604	132	7.20	166.2	25/10	0.24	27/07	19.3	3.72	0.54
079002	**Nith at Friars Carse** C.A: 799.0 km^2	**57..95**	**1537**		**1062**		**26.90**	**1274.0**	**16/01 1962**	**1.15**	**27/08 1984**	**65.9**	**14.71**	**2.70**
M.A: SEPA-W	Local No: 114 Sens.: 7.6 B/full: 590.0m^3s^{-1}													
F.A.R: SPN	Level: 20m UE: <.01 FAI: 0.994													
Comment: Velocity-area station with cableway. Straight approach with bends 150m below station which probably control higher flows. Shallow section with gravel bed. Afton Res. has a minor influence on the flow regime. # Geology: Silurian shales and mudstones. Land use: hill pasture with mixed farming in the valley bottom.		1996	1408	92	1033	97	26.11	310.9	05/11	1.73	21/09	73.8	13.94	2.15
		1997	1522	99	1085	102	27.49	623.3	19/02	2.46	22/07	74.9	12.42	3.18
		1998	1776	116	1326	125	33.59	542.6	20/10	4.90	27/05	72.6	23.87	6.17
		1999	1786	116	1294	122	32.79	581.4	28/11	3.59	24/08	79.6	17.95	4.64
		2000	1889	123	1401	132	35.40	543.2	25/10	2.81	28/07	87.7	21.01	3.90
079005	**Cluden Water at Fiddlers Ford** C.A: 238.0 km^2	**63..95**	**1425**		**1029**		**7.77**	**278.0**	**01/11 1977**	**0.17**	**18/08 1977**	**19.0**	**4.10**	**0.50**
M.A: SEPA-W	Local No: 115 Sens.: 13.8 B/full: 82.0m^3s^{-1}													
F.A.R: SP	Level: 23m UE: <.01 FAI: 0.991													
Comment: Velocity-area station under natural channel control. Straight reach with gravel bed. Cableway. Contains Glenkin Res. 1-2% of flows abstracted. # Geology: Silurian shales and mudstones in upper catchment; Permian basal breccias, s'sts and mudstones in lower catchment. Pasture giving way to rough grazing on higher ground, some forestry.		1996	1437	101	1065	103	8.02	90.7	26/10	0.32	18/08	23.5	3.71	0.40
		1997	1496	105	1033	100	7.79	121.7	17/02	0.27	22/07	21.2	3.54	0.62
		1998	1725	121	1273	124	9.61	137.5	20/10	0.61	27/05	21.9	6.09	1.39
		1999	1738	122	1253	122	9.46	140.8	28/11	0.68	24/08	21.9	4.82	1.15
		2000	1956	137	1492	145	11.23	139.4	25/10	0.48	27/07	29.1	6.67	1.07
080001	**Urr at Dalbeattie** C.A: 199.0 km^2	**63..95**	**1330**		**924**		**5.83**	**164.3**	**20/12 1982**	**0.05**	**20/08 1995**	**14.8**	**2.99**	**0.24**
M.A: SEPA-W	Local No: 112 Sens.: 9.6 B/full: 95.0m^3s^{-1}													
F.A.R: N	Level: 4m UE: <.01 FAI: 0.969													
Comment: Velocity-area station located between two sharp bends. Gravel and rock bar forms low flow control. Cableway. Occasional tidal peaks recorded. # Geology: Silurian shales and greywackes with granite intrusion in Dalbeattie area. Extensively Boulder Clay covered. Land use: pasture, hill grazing and some forestry.		1996	1321	99	923	100	5.81	103.5	27/10	0.10	22/09	17.4	2.42	0.18
		1997	1309	98	805	87	5.08	101.8	17/02	0.23	16/08	13.5	2.17	0.36
		1998	1609	121	1114	121	7.03	150.8	20/10	0.56	27/05	16.0	4.46	0.93
		1999	1594	120	1036	112	6.54	112.6	28/11	0.43	24/08	16.8	3.18	0.43
		2000	1782	134	1273	138	8.01	126.6	25/10	0.28	27/07	20.7	4.43	0.62
080004	**Green Burn at Loch Dee** C.A: 2.6 km^2	**83..95**	**2577**		**2244**		**0.19**	**7.2**	**28/03 1987**	**>0.00**	**22/08 1995**	**0.5**	**0.07**	**0.01**
M.A: SEPA-W	Local No: 110 Sens.: 18.7 B/full: 3.0m^3s^{-1}													
F.A.R: N	Level: 228m UE: FAI:													
Comment: Velocity-area station with an informal timber control. Natural flow regime. # Moderate relief moorland catchment draining granite; Boulder Clay and peat superficial cover on lower slopes. Young coniferous plantations cover 60-70% of the catchment.		1996	2396	93	2303	103	0.19	3.9	11/10	>0.00	20/07	0.6	0.06	0.01
		1997	2458	95	2317	103	0.19	3.4	02/09	0.01	04/06	0.5	0.07	0.01
		1998	3071	119	3076	137	0.25	3.5	20/10	0.01	22/05	0.8	0.10	0.02
		1999	2864	111	2650	118	0.22	4.3	05/11	>0.00	10/08	0.7	0.08	0.01
		2000	3093	120	2973	132	0.24	4.4	24/10	>0.00	27/07	0.7	0.09	0.01
080003	**White Laggan Burn at Loch Dee** C.A: 5.7 km^2	**80..95**	**2613**		**2279**		**0.41**	**9.7**	**26/09 1980**	**>0.00**	**22/08 1995**	**1.1**	**0.18**	**0.02**
M.A: SEPA-W	Local No: 108 Sens.: 44.4 B/full: 5.0m^3s^{-1}													
F.A.R: N	Level: 226m UE: <.01 FAI: 0.996													
Comment: Velocity-area station. Informal wooden assymetrical Flat V weir controls most flows. Occasional backwater effects from Loch Dee after prolonged wet periods. Gauge on long straight section with gravel bed and low grassy banks. # Geology: Lower catchment Loch Doon Granite; mid catchment metamorphosed country rocks giving way to unaltered Ordovician and Silurian shales and greywackes to the S. 20% of catchment covered by young forestry plantation, rest is rugged upland.		1996	2479	95	2161	95	0.39	10.1	09/02	0.01	19/09	1.2	0.13	0.02
		1997	2484	95	2066	91	0.37	7.7	02/09	0.02	04/06	1.0	0.15	0.03
		1998	3158	121	2707	119	0.49	6.4	02/08	0.01	24/05	1.4	0.21	0.03
		1999	2949	113	2329	102	0.42	5.4	24/01	0.01	01/08	1.1	0.19	0.03
		2000	3228	124	2599	114	0.47	5.8	28/11	0.01	22/07	1.4	0.23	0.02
080005	**Dargall Lane at Loch Dee** C.A: 2.1 km^2	**83..95**	**2519**		**2448**		**0.16**	**11.3**	**29/01 1984**	**>0.00**	**24/08 1984**	**0.4**	**0.09**	**0.01**
M.A: SEPA-W	Local No: 111 Sens.: 30.6 B/full: 4.0m^3s^{-1}													
F.A.R: N	Level: 259m UE: FAI:													
Comment: Natural river section with boulder control. Reasonable approach, gauged by wading. Natural flow regime. # High relief moorland catchment, draining granite; shallow peat and Boulder Clay cover on lower slopes.		1996	2349	93	2503	102	0.17	5.4	09/02	0.01	19/09	0.5	0.07	0.02
		1997	2331	93	2355	96	0.16	4.4	02/09	0.01	04/06	0.3	0.07	0.02
		1998	3011	120	3273	134	0.22	4.4	20/10	0.02	27/05	0.5	0.13	0.03
		1999	2797	111	2561	105	0.17	3.2	22/12	0.01	10/08	0.4	0.09	0.02
		2000	3077	122	3049	125	0.20	4.3	27/09	0.01	23/07	0.5	0.12	0.02
080002	**Dee at Glenlochar** C.A: 809.0 km^2	**77..95**	**1888**		**1616**		**41.46**	**352.8**	**12/12 1994**	**1.38**	**16/05 1978**	**102.7**	**28.87**	**3.38**
M.A: SEPA-W	Local No: 107 Sens.: 10.8 B/full: 400.0m^3s^{-1}													
F.A.R: H	Level: 43m UE: FAI:													
Comment: VA station on gentle bend about 500m d/s of Glenlochar Barrage. All flows contained at section. Gravel bed with some large boulders. Cableway. Lowest gauge on highly regulated river: distribution of flows controlled by Glenlochar Barrage feeding Glenlec HEP station. # Geology: Ordovician and Silurian shales and greywackes, with two major granitic intrusions. Glacial drift deposits on lower ground. Scenic catchment with rugged peaks and extensive afforestation giving way to rolling lowland pastures.		1996	1706	90	1361	84	34.83	202.9	28/10	1.45	05/08	100.7	17.46	2.63
		1997	1783	94	1440	89	36.94	233.9	19/02	2.84	23/07	98.3	21.01	4.55
		1998	2121	112	1921	119	49.28	321.1	21/10	5.91	22/06	102.7	39.03	6.29
		1999	2117	112	1775	110	45.53	289.4	23/12	4.63	06/09	108.0	28.98	7.07
		2000	2299	122	2031	126	51.96	330.0	25/10	5.71	27/07	120.0	36.79	7.09
081007	**Water of Fleet at Rusko** C.A: 77.0 km^2	**88..95**	**1909**		**1424**		**3.48**	**99.3**	**21/12 1991**	**0.07**	**21/08 1995**	**8.4**	**1.68**	**0.20**
M.A: SEPA-W	Local No: 106 Sens.: 6.0 B/full: 70.0m^3s^{-1}													
F.A.R: N	Level: 8m UE: FAI:													
Comment: Velocity-area station on short straight reach with gravel bed and gravel shoal control. Flows well contained with help from rh floodbank. # Geology: Silurian shales with granitic intrusion which forms highest point in catchment at Cairnsmore of Fleet. Rugged moorland catchment with some forestry.		1996	1756	92	1442	101	3.51	67.1	12/10	0.10	21/09	10.7	1.32	0.17
		1997	1603	84	1275	90	3.11	71.7	03/09	0.16	22/07	7.2	1.32	0.30
		1998	2143	112	1724	121	4.21	89.4	20/10	0.30	27/05	11.0	2.25	0.47
		1999	2057	108	1404	99	3.43	79.7	05/11	0.25	12/07	9.2	1.61	0.35
		2000	2114	111	1642	115	4.00	86.1	25/10	0.11	28/07	9.6	1.98	0.24

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
081006 Water of Minnoch at Minnoch Bridge C.A: 141.0 km^2	**86..95**	**2276**		**1783**		**7.97**	**332.1**	**30/03**	**0.07**	**30/06**	**19.1**	**4.22**	**0.40**
M.A: SEPA-W Local No: 105 Sens.: 24.0 B/full: 150.0m^3s^{-1}								**1993**		**1992**			
F.A.R: N Level: 27m UE: FAI:													
Comment: Velocity-area station on straight reach with gravel bed below steep rocky section. Rh low floodbank occasionally breached. Cableway spans across rh floodbank. # Geology: Ordovician shales and greywackes. Natural catchment includes rugged uplands. Extensive forestry (Glentrool Forest).	1996	1936	85	1656	93	7.38	122.7	12/10	0.23	22/09	20.9	3.15	0.48
	1997	1977	87	1473	83	6.59	138.4	03/09	0.31	22/07	17.5	3.21	0.53
	1998	2481	109	2032	114	9.09	236.2	20/10	0.38	08/10	21.8	5.80	0.73
	1999	2273	100	1745	98	7.80	218.0	22/12	0.33	12/08	18.7	4.20	0.69
	2000	2617	115	*2016*	113	8.99			0.41		23.7	5.31	0.70
081002 Cree at Newton Stewart C.A: 368.0 km^2	**63..95**	**1800**		**1337**		**15.60**	**347.2**	**30/03**	**0.14**	**01/09**	**38.7**	**8.11**	**0.91**
M.A: SEPA-W Local No: 104 Sens.: 7.6 B/full: 330.0m^3s^{-1}								**1993**		**1976**			
F.A.R: N Level: 5m UE: <.01 FAI: 0.944													
Comment: Velocity-area station located on long, reasonably straight, gravel bedded reach. Cableway. Natural controls, gravel riffle 50m below site controls lower flows. # Natural catchment with a few small lochs, moorland and forest.	1996	1736	96	1297	97	15.09	192.3	12/10	0.38	22/09	40.9	5.95	0.89
	1997	1710	95	1196	89	13.95	197.7	03/09	0.67	22/07	35.2	6.74	1.14
	1998	2185	121	1650	123	19.26	307.6	20/10	0.83	28/05	48.8	11.74	1.31
	1999	1983	110	1376	103	16.05	276.9	22/12	0.82	12/08	39.0	8.08	1.50
	2000	2283	127	1667	125	19.40	**396.4**	**25/10**	0.59	14/05	49.0	10.91	1.15
081004 Bladnoch at Low Malzie C.A: 334.0 km^2	**77..95**	**1399**		**961**		**10.18**	**144.4**	**02/10**	**0.04**	**23/08**	**25.8**	**5.78**	**0.37**
M.A: SEPA-W Local No: 103 Sens.: 21.5 B/full: 70.0m^3s^{-1}								**1981**		**1995**			
F.A.R: N Level: 11m UE: FAI:													
Comment: Velocity-area station on straight reach in a meandering section of river situated in pastures. Long cableway ensures flows over berms gauged. Weedy islands below gauge. Natural control. # Geology: Silurian shales and greywackes overlain by Boulder Clay and substantial areas of peat. Natural catchment in lowland area.	1996	1359	97	924	96	9.76	110.6	12/03	0.23	05/08	29.2	4.40	0.28
	1997	1254	90	744	77	7.88	93.8	06/12	0.34	22/07	22.0	3.92	0.52
	1998	1624	116	1160	121	12.29	118.8	21/10	0.45	28/05	31.2	7.03	0.84
	1999	1424	102	934	97	9.90	73.6	03/12	0.46	12/08	28.1	4.99	0.62
	2000	1666	119	1121	117	11.84	**160.5**	**25/10**	0.29	30/07	30.7	6.07	0.65
081003 Luce at Airyhemming C.A: 171.0 km^2	**67-95**	**1485**		**1108**		**6.01**	**283.6**	**13/08**	**0.09**	**26/07**	**16.0**	**2.50**	**0.28**
M.A: SEPA-W Local No: 102 Sens.: 15.4 B/full: 64.0m^3s^{-1}								**1987**		**1984**			
F.A.R: SPN Level: 19m UE: <.01 FAI: 0.978													
Comment: Velocity-area station on long straight and uniform reach with wooded banks. Natural channel control. Cableway. Penwhirn Reservoir abstractions constitute approx. 2% of flows. # Geology: Silurian shales and greywackes. Natural moorland catchment draining westerly end of Southern Uplands.	1996	1522	102	1148	104	6.21	163.6	12/03	0.23	20/09	17.4	1.99	0.31
	1997	1421	96	958	86	5.20	138.4	05/12	0.26	22/07	15.4	1.87	0.37
	1998	1863	125	1460	132	7.92	175.0	01/01	0.37	27/05	20.3	3.74	0.48
	1999	1571	106	1120	101	6.07	90.4	25/01	0.23	12/07	17.6	2.39	0.33
	2000	1859	125	1437	130	7.77	198.9	25/10	0.17	30/07	20.8	3.34	0.31
081005 Piltanton Burn at Barsolus C.A: 34.2 km^2	**85..95**	**1150**		**688**		**0.75**	**20.0**	**22/10**	**0.02**	**20/09**	**1.8**	**0.40**	**0.07**
M.A: SEPA-W Local No: 101 Sens.: 28.0 B/full: 19.0m^3s^{-1}								**1994**		**1995**			
F.A.R: N Level: 6m UE: FAI:													
Comment: Artificial channel maintained by statutory drainage scheme. Station utilises check weir as control to low flows. Flood flows generally contained. Cableway. Major weed growth problems requiring complicated rating (not yet applied to 1997 dmfs, treat with caution). Good high flow rating. # Geology: Ordovician shales and greywackes. Lowland agricultural catchment.	1996	1147	100	707	103	0.76	18.5	24/11	0.05	17/09	2.2	0.29	0.06
	1997	1010	88			0.49	14.6		0.04				
	1998	1343	117	781	114	0.85	16.4	24/10	0.08	27/05	1.9	0.44	0.10
	1999	1189	103	593	86	0.64	10.7	19/09	0.05	02/08	1.6	0.30	0.06
	2000	1250	109	871	127	0.94	20.1	10/10	0.04	30/07	2.7	0.31	0.05
082003 Stinchar at Balnowlart C.A: 341.0 km^2	**73..95**	**1642**		**1008**		**10.90**	**273.0**	**19/12**	**0.03**	**08/07**	**26.3**	**6.11**	**0.50**
M.A: SEPA-W Local No: 145 Sens.: 13.0								**1982**		**1975**			
F.A.R: Level: 3m UE: <.01 FAI: 0.989													
Comment: Velocity-area station in long straight reach; riffle control. All but exceptional floods contained. Hydrometric performance has been modestly affected by a leaking stilling well. PWS abstractions cause small reduction in runoff. Very limited storage within the catchment. # Geology: dominated by metamorphosed s'st and shales (Ordovician) with igneous outcrops in the headwaters, overlain with Peat and Boulder Clay. Rural catchment with extensive forested upland areas in W (Carrick Forest); hill pasture elsewhere.	1996	1427	87	907	90	9.78	144.6	12/10	0.45	22/09	26.0	4.68	0.70
	1997	1420	86	881	87	9.53	150.5	31/12	0.54	21/07	24.0	5.18	0.83
	1998	1807	110	1184	117	12.80	220.4	01/01	0.93	21/06	29.2	8.51	1.20
	1999	1611	98	1040	103	11.24	209.9	22/12	0.78	12/08	27.9	6.40	1.18
	2000	1880	114	1171	116	12.63	249.7	25/10	0.42	30/07	30.2	7.05	0.70
082001 Girvan at Robstone C.A: 245.5 km^2	**63..95**	**1395**		**833**		**6.48**	**183.0**	**19/12**	**0.03**	**11/07**	**16.0**	**3.28**	**0.48**
M.A: SEPA-W Local No: 146 Sens.: 10.9 B/full: 90.0m^3s^{-1}								**1982**		**1977**			
F.A.R: S Level: 9m UE: <.01 FAI: 0.956													
Comment: Velocity-area station with gravel bar control - subject to regrading in substantial floods. Flood banks now contain all flows, previously inundated rb. Runoff diminished by abstractions from Loch Bradan. Additional storage in a few high level lochs. # An upland catchment draining from Carrick Forest. Complex geology: Ordovician/Carboniferous metamorphics and igneous formations; Drift and peat also. Land use: mostly hill pasture with some mixed farming in the valley and afforestation in the headwaters.	1996	1134	81	574	69	4.46	86.3	12/10	0.08	22/09	11.3	1.82	0.15
	1997	1283	92	714	86	5.56	94.1	06/12	0.19	23/07	15.7	2.31	0.29
	1998	1621	116	1149	138	8.95	104.0	01/01	0.42	04/07	22.7	4.79	0.59
	1999	1595	114	1119	134	8.71	103.3	06/12	0.69	24/08	23.6	3.93	1.06
	2000	1750	125	1053	126	8.17	84.4d	08/03	0.24	04/07	21.2	3.23	0.37
082002 Doon at Auchendrane C.A: 323.8 km^2	**74..95**	**1678**		**728**		**7.47**	**121.5**	**31/10**	**2.00**	**19/06**	**15.4**	**4.98**	**2.68**
M.A: SEPA-W Local No: 147 Sens.: 6.2								**1977**		**1989**			
F.A.R: P Level: 22m UE: FAI:													
Comment: Velocity-area station in straight section; riffle control at low flows, rock boulder control at high discharges. Wide floodplain u/s but all flows contained. Flow regime heavily influenced by regulation releases from Loch Doon (129.5 sq.km) : large export of water reduces runoff substantially. # Upland catchment developed on basement rocks - metamorphosed sediments (Ordovician and Carboniferous) and igneous formations; Drift also. Hill pasture is the principal land use, some afforestation - mostly in headwaters.	1996	1365	81	577	79	5.91	37.2	10/02	2.59	31/08	12.7	3.79	2.80
	1997	1571	94	620	85	6.36	46.8	06/12	2.31	30/06	13.3	4.10	2.55
	1998	1935	115	843	116	8.65	60.4	11/02	2.73	28/05	17.9	6.15	3.11
	1999	1946	116	852	117	8.75	78.8	06/12	3.17	23/08	19.5	5.55	3.38
	2000	2138	127	849	117	8.70	94.3	08/03	2.75	27/07	18.3	5.75	2.91
083003 Ayr at Catrine C.A: 166.3 km^2	**70..95**	**1334**		**967**		**5.10**	**201.0**	**10/12**	**0.21**	**26/05**	**13.1**	**2.28**	**0.53**
M.A: SEPA-W Local No: 144 Sens.: 16.7 B/full: 500.0m^3s^{-1}								**1994**		**1974**			
F.A.R: H Level: 90m UE: <.01 FAI: 0.992													
Comment: Velocity-area station in a long straight reach with a large pipe forming an informal broad-crested control (somewhat insensitive). All flows contained. A responsive, natural catchment but the flow pattern is modestly affected (esp. at low flows) by the operation of a small HEP scheme 1km u/s. # A catchment of rugged topography draining W from Southern Uplands. Geology: complex with Carboniferous sediments and igneous outcrops predominating; Drift and peat also. Hill grazing is the main land use.	1996	1076	81	678	70	3.57	56.7	18/02	0.46	15/08	10.8	1.30	0.52
	1997	1272	95	801	83	4.22	90.1	05/05	0.51	26/08	10.6	1.68	0.58
	1998	1718	129	1209	125	6.37	76.7	28/10	0.72	26/05	15.3	3.54	0.85
	1999	1648	124	1192	123	6.28	142.7	06/12	0.70	24/08	17.1	2.74	0.85
	2000	1598	120	1182	122	6.21	172.5	09/03	0.54	23/07	15.6	2.82	0.66
083004 Lugar Water at Langholm C.A: 181.0 km^2	**72..95**	**1327**		**1004**		**5.76**	**261.7**	**02/01**	**0.07**	**03/09**	**15.4**	**2.48**	**0.30**
M.A: SEPA-W Local No: 148 Sens.: 10.0 B/full: 153.3m^3s^{-1}								**1981**		**1981**			
F.A.R: N Level: 81m UE: <.01 FAI: 0.993													
Comment: Velocity-area station with rock/boulder control (may be subject to erosion/accretion) plus a thin-plate weir in the mill lade (Langholm B, local no. 140, station level 84.17mOD). Combined flows are archived. Very responsive, natural catchment (minor effluent discharge close to the station). # An upland catchment developed, mainly, on Carboniferous sediments (chiefly Coal Measures) and igneous formations; Drift also. Hill grazing is the major land use; some forestry.	1996	1052	79	*709*	71	4.06					12.7	1.33	0.34
	1997	1197	90	775	77	4.45	97.8	18/11	0.29	27/09	12.1	1.52	0.35
	1998	1619	122	1149	114	6.59	115.7	24/10	0.37	27/05	16.8	3.48	0.46
	1999	1585	119	1162	116	6.67	122.3	06/12	0.27	11/08	19.1	2.74	0.35
	2000	1559	117	1100	110	6.30	103.2d	08/03	0.33	23/07	15.7	2.81	0.42
083006 Ayr at Mainholm C.A: 574.0 km^2	**76..95**	**1299**		**872**		**15.87**	**415.2**	**12/12**	**0.79**	**24/06**	**41.7**	**7.53**	**1.42**
M.A: SEPA-W Local No: 149 Sens.: 8.1 B/full: 574.5m^3s^{-1}								**1994**		**1989**			
F.A.R: N Level: 3m UE: <.01 FAI: 0.994													
Comment: Velocity-area station in long straight section; channel control. Very steep banks; most flows contained - overspilling occurs on lb. Responsive, natural catchment. # Complex geology: Carboniferous sediments (chiefly Coal Measures) predominate, but some igneous formations and Permian s'sts in upper reaches. Drift and peat cover also. Low lying rural catchment, no major urban centres. Hill grazing in headwaters, mixed farming at lower levels.	1996	996	77	564	65	10.23	143.8	18/12	0.92	22/09	28.3	3.40	1.13
	1997	1151	89	636	73	11.57	214.1	06/12	1.30	14/08	30.2	4.36	1.45
	1998	1576	121	990	114	18.02	231.3	11/02	1.66	27/05	43.5	9.26	2.07
	1999	1524	117	1016	117	18.48	311.9	06/12	1.58	24/08	52.8	7.68	1.99
	2000	1488	115	1092	125	19.82	324.3	25/10	1.97	24/07	46.4	9.82	2.48

		Period	Rainfall (mm)	% of pre-1998	Runoff (mm)	% of pre-1998	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
083010	**Irvine at Newmilns** C.A: 72.8 km^2	**77..95**	**1495**		**1066**		**2.46**	**163.5**	**10/09 1978**	**0.09**	**25/08 1984**	**6.4**	**1.10**	**0.21**
M.A: SEPA-W	Local No: 139 Sens.: 19.2 B/full: 126.1m^3s^{-1}													
F.A.R: N	Level: 61m UE: FAI:													
Comment: Flat V weir within broad-crested flanks in a long straight reach, superseded (Sep 1976) an unstable gravel bar control. Stage data collected for this site dates back to 1959. Sensibly natural flow regime. # Upland catchment developed on basalts and metamorphosed sedimentary formations (mostly Carboniferous and ORS); Drift also. Moorland and rough pasture predominate, significant afforestation in the north, mixed farming in the valley - Greenholm and Darvel are the largest settlements.		1996	1082	72	658	62	1.52	39.7	12/10	0.10	01/08	4.0	0.54	0.16
		1997	1203	80	779	73	1.80	36.4	10/10	0.17	24/08	4.7	0.75	0.19
		1998	1714	115	1299	122	3.00	*47.5*	*21/10*	0.27	07/07	7.6	1.66	0.34
		1999	1655	111	1189	112	2.75	84.4	06/12	0.24	23/08	7.0	1.38	0.33
		2000	1616	108	1161	109	2.67	68.5	08/03	0.21	22/07	6.5	1.32	0.27
083013	**Irvine at Glenfield** C.A: 218.0 km^2	**82..95**	**1344**		**997**		**6.89**	**436.8**	**11/12 1994**	**>0.00**	**15/08 1984**	**17.1**	**2.90**	**0.35**
M.A: SEPA-W	Local No: 164 Sens.: B/full: 85.0m^3s^{-1}													
F.A.R: N	Level: 21m UE: FAI:													
Comment: River section with broad crested masonry weir acting as control. All but very high flows contained. Natural flow regime. # Predominantly Carboniferous and igneous rocks, with localised ORS. Drift covers lower reaches. Rural catchment with forested areas in NE and urbanisation along main valley (Darvel, Newmilns, Galston and Kilmarnock).		1996	983	73	528	53	3.64	126.8	12/10	0.16	18/08	11.1	0.91	0.19
		1997	1089	81	631	63	4.36	127.8	06/12	0.21	26/08	11.7	1.59	0.26
		1998	1574	117	1122	113	7.75	194.1	21/10	0.28	05/06	19.7	3.91	0.42
		1999	1497	111	1041	104	7.20	289.0	06/12	0.27	24/08	19.1	2.64	0.41
		2000	1450	108	981	98	6.76	289.0	25/10	0.11	24/07	17.3	2.46	0.21
083005	**Irvine at Shewalton** C.A: 380.7 km^2	**72..95**	**1264**		**811**		**9.79**	**341.2**	**18/01 1974**	**0.14**	**24/06 1989**	**25.5**	**4.21**	**0.54**
M.A: SEPA-W	Local No: 142 Sens.: 8.3 B/full: 431.3m^3s^{-1}													
F.A.R: E	Level: 5m UE: .02 FAI: 0.982													
Comment: Velocity-area station with rock bar/bridge debris control - channel control at high flows. All flows contained. A responsive, sensibly natural flow regime (but affected by effluent from STW). # Generally an upland catchment but topography more subdued below Greenholm. Geology: mostly Carboniferous sediments with basalt tracts towards headwaters; Drift also. Land use: mixed farming and hill grazing; some forestry in the upper catchment. Kilmarnock (12km u/s) is the only large urban area.		1996	994	79	524	65	6.31	146.8	12/10	0.16	16/09	19.1	1.88	0.25
		1997	1091	86	570	70	6.89	142.7	06/12	0.16	30/08	19.3	2.66	0.22
		1998	1585	125	998	123	12.04	178.1	21/10	0.34	27/05	29.9	6.01	0.57
		1999	1504	119	906	112	10.94	237.7	06/12	0.34	24/08	29.1	4.44	0.64
		2000	1445	114	866	107	10.43	211.4	25/10	0.21	23/07	25.4	4.40	0.37
083008	**Annick Water at Dreghorn** C.A: 90.6 km^2	**80..95**	**1438**		**1255**		**3.61**	**110.4d**	**10/12 1994**	**0.07**	**19/08 1984**	**8.8**	**1.68**	**0.23**
M.A: SEPA-W	Local No: 159 Sens.: 17.5 B/full: 36.3m^3s^{-1}													
F.A.R: N	Level: m UE: FAI:													
Comment: Velocity-area station with open channel section; some control from a bridge 30m d/s. Various temporary controls have been sited in the river following the removal of an earlier weir (Jul 1982). Calibration checked regularly. Long Loch and Corsehouse Res. can affect the flow regime. # Geology: mainly Coal Measures overlain by Boulder Clay, with river terraces and raised beach deposits along river channel. Land use: predominantly grazing with isolated forested areas. Urbanisation limited to Stewarton and Irvine.		1996	1142	79	966	77	2.77	53.9	12/10	0.22	19/09	7.1	1.01	0.26
		1997	1199	83	988	79	2.84	56.3	06/12	0.16	25/07	7.1	1.23	0.32
		1998	1726	120	1762	140	5.06	61.1	28/11	0.33	05/06	11.6	3.36	0.47
		1999	1637	114										
		2000	1564	109	1221	97	3.50	57.7	02/03			8.7	1.60	0.26
083009	**Garnock at Kilwinning** C.A: 183.8 km^2	**78-95**	**1658**		**1122**		**6.54**	**380.6**	**11/12 1994**	**0.09**	**17/08 1984**	**16.5**	**2.66**	**0.24**
M.A: SEPA-W	Local No: 138 Sens.: 9.0 B/full: 379.4m^3s^{-1}													
F.A.R:	Level: m UE: FAI:													
Comment: River section with long round-crested masonry weir (with central rectangular notch) acting as the control. All flows contained. Exceptionally high tides may influence water levels. Very responsive catchment notwithstanding several reservoirs (including Muirhead and Camphill) in the headwaters - small net diminution in runoff. # Rugged upland headwaters (peat and Boulder Clay overlying igneous formations), mostly Carboniferous sediments covered by Drift in lower catchment. Mainly rural with urbanisation along main valley at Kilbirnie, Dalry and Kilwinning.		1996	1442	87	971	87	5.64	125.2	28/10	0.21	21/07	15.6	2.10	0.33
		1997	1397	84	871	78	5.08	119.7	06/12	0.22	26/07	12.6	2.20	0.28
		1998	1983	120	1478	132	8.62	305.8	22/10	0.42	07/07	20.3	4.27	0.69
		1999	1886	114	1287	115	7.50	173.7	03/12	0.28	11/08	20.3	3.13	0.45
		2000	1745	105	1151	103	6.69	237.2	25/10	0.19	29/07	16.7	2.60	0.29
083007	**Lugton Water at Eglinton Castle** C.A: 54.6 km^2	**77..95**	**1435**		**1006**		**1.74**	**44.7**	**05/11 1986**	**0.03**	**27/07 1982**	**4.6**	**0.72**	**0.09**
M.A: SEPA-W	Local No: 137 Sens.: 55.2 B/full: 54.4m^3s^{-1}													
F.A.R:	Level: m UE: FAI:													
Comment: Velocity-area station with a broad-crested masonry weir as control - insensitive at low flows; algae can accumulate on crest. Cableway (in a straight reach) used for rating. Wide floodplain. Very responsive flow pattern. # A linear catchment of subdued relief, rural in character. Impervious basalts predominate in the headwaters, Carboniferous sediments below; significant spreads of Drift. Loch Liba has little affect on flows.		1996	1183	82	833	83	1.44	22.6	12/02	0.13	17/07	4.0	0.42	0.16
		1997	1218	85	773	77	1.34	31.1	06/12	0.06	20/07	3.6	0.57	0.08
		1998	1728	120	1303	130	2.26	35.0	28/11	0.15	26/05	6.0	1.12	0.23
		1999	1639	114	1141	113	1.98	38.2	06/12	0.08	03/09	5.3	0.77	0.11
		2000	1543	108	1022	102	1.76	31.0	25/10	**0.03**	**20/07**	4.5	0.70	0.06
084022	**Duneaton at Maidencots** C.A: 110.3 km^2	**68..95**	**1397**		**881**		**3.08**	**120.4**	**12/12 1994**	**0.13**	**26/07 1984**	**7.3**	**1.89**	**0.44**
M.A: SEPA-W	Local No: 118 Sens.: 14.8 B/full: 185.6m^3s^{-1}													
F.A.R: N	Level: 228m UE: FAI:													
Comment: Velocity-area station with a ragged rock bar control - considered to be stable and sensitive. Bypassing is unlikely. No significant storages or (currently) abstractions. Some early flow data available from 1965. # An upland catchment developed mainly on Drift overlying ORS (and older) formations. Some forestry.		1996	1157	83	716	81	2.50	38.9	08/01	0.26	20/09	6.2	1.50	0.31
		1997	1368	98	847	96	2.96	96.4	18/11	0.42	12/08	6.9	1.43	0.54
		1998	1626	116	1072	122	3.75	50.7	21/10	0.73	08/10	8.2	2.41	0.88
		1999	1624	116	1175	133	4.11	101.2	05/11	0.55	05/09	9.4	2.40	0.70
		2000	1671	120	1200	136	4.19	101.6	09/03	0.43	27/07	9.3	2.36	0.54
084004	**Clyde at Sills of Clyde** C.A: 741.8 km^2	**57..95**	**1258**		**784**		**18.43**	**410.4**	**14/08 1966**	**1.51**	**27/08 1984**	**40.7**	**11.58**	**3.50**
M.A: SEPA-W	Local No: 122 Sens.: 5.9 B/full: 411.3m^3s^{-1}													
F.A.R:	Level: 183m UE: <.01 FAI: 0.976													
Comment: Sited on a 200m straight natural reach between two sharp opposing bends. Low flow control is a riffle 30m d/s. Section rated by c/m to 2.9m. Flows are straight at cableway but there is some turbulence. Station transferred from SDD to Clyde RPB in Jul 1969. # Drains part of Southern Uplands, with several small storage reservoirs in headwaters. Geology: Silurian and Ordovician sedimentary rocks. Land use: rough grazing with increasing afforestation.		1996	1100	87	692	88	16.23	132.9	09/01	1.71	20/09	41.1	9.69	2.01
		1997	1272	101	826	105	19.43	262.2	20/02	3.64	12/08	42.0	9.07	4.21
		1998	1490	118	1100	140	25.88	193.8	21/10	5.14	26/05	52.2	19.14	6.22
		1999	1524	121	1090	139	25.65	283.6	29/11	4.70	05/09	58.1	14.26	5.37
		2000	1567	125	1168	149	27.40	281.8	25/10	3.18	23/07	63.8	15.89	3.80
084037	**Douglas Water at Happendon** C.A: 97.0 km^2	**89..95**	**1424**		**919**		**2.83**	**71.7**	**11/12 1994**	**0.26**	**07/08 1995**	**7.0**	**1.70**	**0.42**
M.A: SEPA-W	Local No: Sens.: B/full: 27.7m^3s^{-1}													
F.A.R: N	Level: m UE: FAI:													
Comment: Crump weir. All flows contained. # Geology: Carboniferous rocks with local occurrences of Lower ORS, intruded by basaltic and doleritic dykes. Rural catchment having undergone some afforestation. Two small lochs in catchment but flow pattern remains responsive.		1996	1060	74	601	65	1.84	18.1	19/12	**0.25**	**20/09**	4.5	0.92	0.28
		1997	1283	90	745	81	2.29	34.8	18/11	0.38	12/08	5.5	1.15	0.41
		1998	1584	111	1051	114	3.23	18.9d	11/02	0.52	07/07	7.1	2.28	0.63
		1999	1571	110	1072	117	3.30	51.0	28/11	0.38	05/09	7.9	1.83	0.47
		2000	1573	110	1048	114	3.21	58.9	09/03	0.34	23/07	8.0	1.81	0.41
084018	**Clyde at Tulliford Mill** C.A: 932.6 km^2	**69-95**	**1249**		**860**		**25.43**	**558.6**	**31/10 1977**	**1.48**	**27/08 1984**	**58.5**	**15.86**	**4.02**
M.A: SEPA-W	Local No: 125 Sens.: 16.3 B/full: 587.5m^3s^{-1}													
F.A.R: P	Level: 174m UE: <.01 FAI: 0.979													
Comment: Velocity-area station with a natural control. Banks overtopped at flows in excess of MAF. Catchment includes a number of PWS gathering grounds from which the yield is exported. Monthly naturalised flows available. # Mixed geology - ancient sedimentaries (ORS/Ordovician) dominate the headwaters; mostly igneous formations below. Substantial Drift cover. The catchment ranges in height from 180-800m. About one third is cultivated, the remainder is hill grazing and moorland.		1996	1066	85	650	76	19.16	128.6	09/01	3.18	20/09	50.6	10.37	3.55
		1997	1247	100	798	93	23.59	281.9	20/02	4.91	31/08	49.9	12.12	5.48
		1998	1478	118	1119	130	33.09	236.3	21/10	6.31	26/05	65.3	25.44	7.20
		1999	1502	120	1174	137	34.71	309.1	29/11	6.71	05/09	79.2	22.28	8.00
		2000	1532	123	1129	131	33.29	297.0	25/10	4.54	23/07	76.9	20.68	5.08
084009	**Nethan at Kirkmuirhill** C.A: 66.0 km^2	**66..95**	**1231**		**759**		**1.59**	**80.1**	**31/10 1977**	**0.01**	**28/08 1967**	**3.9**	**0.78**	**0.17**
M.A: SEPA-W	Local No: 107 Sens.: 14.4 B/full: 92.4m^3s^{-1}													
F.A.R: PN	Level: 122m UE: <.01 FAI: 0.976													
Comment: Compound Crump profile weir (centre crest: 2.44m, flanks: 4.27m); significant accretion u/s of rh crest. Theoretical rating - confirmed by gaugings. Flows remain modular and are fully contained; the channel is deeply incised into rock. Runoff is diminished by PWS abstractions. # The Nethan drains from Nutberry Hill. Complex geology - mostly Old Red S'st and Carboniferous L'st with large areas of Drift cover; a mainly impervious catchment. Afforestation in the headwaters, hill pasture below.		1996	956	78	549	72	1.15	20.1	19/12	0.11	18/09	2.7	0.47	0.13
		1997	1194	97	683	90	1.43	30.9	11/12	0.16	30/08	3.2	0.66	0.19
		1998	1549	126	1099	145	2.30	34.3	11/02	0.26	07/07	5.4	1.48	0.35
		1999	1532	124	992	131	2.08	26.0	06/12	0.22	05/09	5.2	1.17	0.32
		2000	1493	121	997	131	2.08	43.0	25/10	0.15	23/07	4.8	1.14	0.20

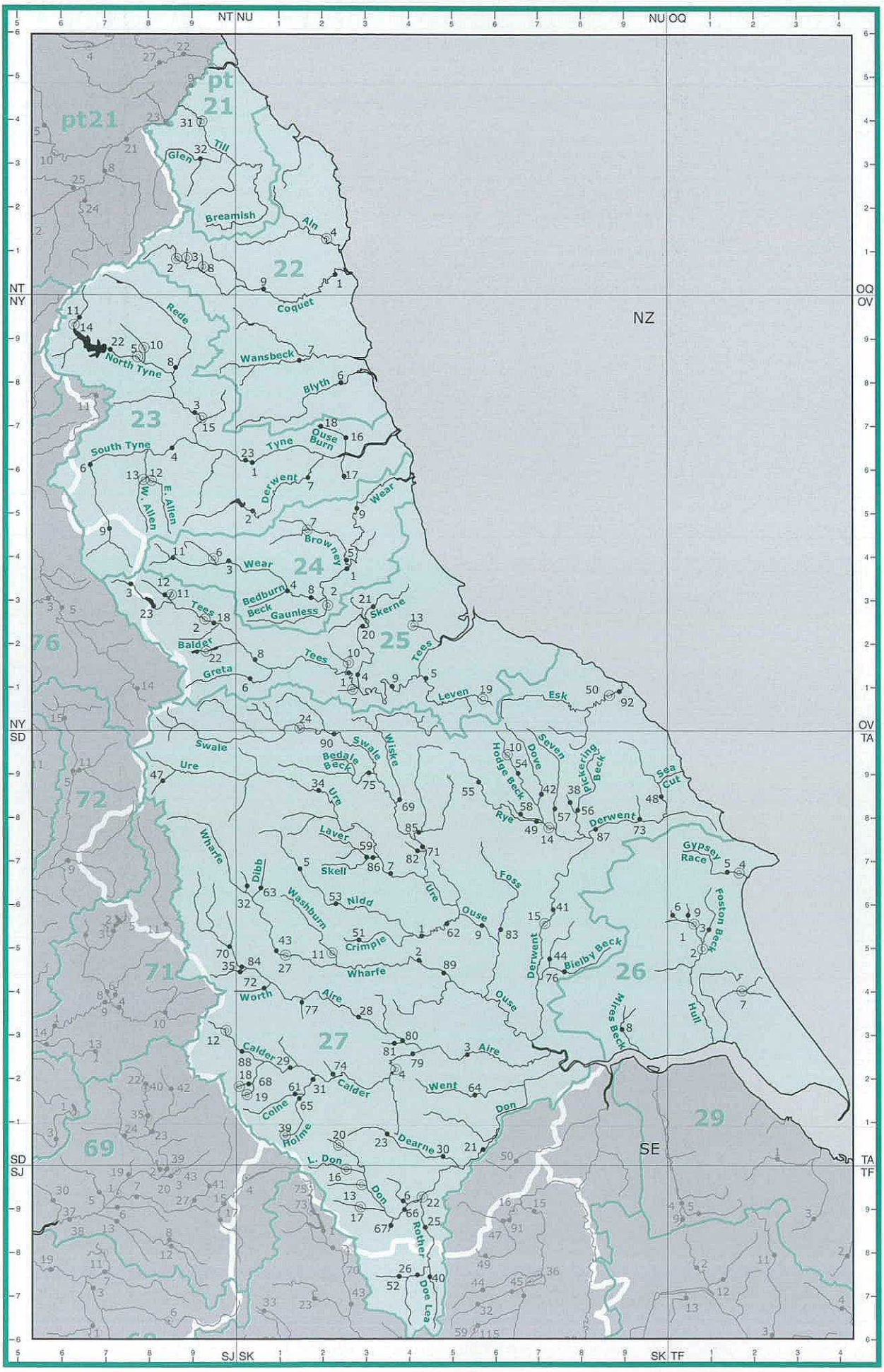
				Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
084003	**Clyde at Hazelbank**		C.A: 1092.9 km^2	**56..95**	**1198**		**785**		**27.20**	**606.5**	**12/12 1994**	**2.20**	**11/10 1959**	**60.6**	**16.89**	**5.30**
M.A: SEPA-W	Local No: 123	Sens.: 5.5	B/full: 181.9m^3s^{-1}													
F.A.R: H	Level: 52m	UE: <.01	FAI: 0.981													
Comment: Velocity-area station in a straight section. Well calibrated. All flows contained. Very minor net impact of artificial influences (some naturalised data) but flow pattern is affected by operation of u/s HEP station (Stonebyres Falls). # Catchment drains from the Southern Uplands. Complex geology: Metamorphics/Igneous/Drift. Hill grazing is principal land use; thinly populated but Lanark is 5km u/s.				1996	1021	85	674	86	23.28	158.8	06/11	2.33	23/09	58.1	14.52	2.91
				1997	1203	100	812	103	28.12	325.4	20/02	5.39	12/08	59.4	15.19	6.60
				1998	1435	120	1080	138	37.43	253.0	21/10	8.61	26/05	70.5	27.80	10.15
				1999	1446	121	1088	139	37.71	352.6	05/11	6.09	05/09	87.4	22.36	7.81
				2000	1479	123	1123	143	38.83	337.6	25/10	4.69	24/07	89.2	23.40	6.11
084029	**Cander Water at Candermill**		C.A: 24.5 km^2	**75..95**	**1083**		**741**		**0.58**	**60.9**	**31/10 1977**	**0.01**	**13/08 1983**	**1.5**	**0.22**	**0.04**
M.A: SEPA-W	Local No: 131	Sens.: 34.3	B/full: 119.3m^3s^{-1}													
F.A.R:	Level: m	UE:	FAI:													
Comment: Non-standard Flat V broad-crested weir, no wing walls; current meter calibration. Flood flows spill onto banks. High flow rating under review following road works involving the rb. Responsive flow regime. # Small, northward draining, rural catchment developed on productive Coal Measures, with ORS (Greywacke Conglomerate) occurring on some hills. Boulder Clay and terrace gravels along the Cander Water. Quarrying activity in S. of catchment.				1996	791	73	445	60	0.35	11.5	06/11	0.03	20/09	0.8	0.13	0.03
				1997	993	92	597	81	0.46	27.4	17/02	0.05	24/08	1.0	0.18	0.06
				1998	1314	121	889	120	0.69	22.0	27/12	0.07	26/05	1.6	0.32	0.10
				1999	1292	119	947	128	0.74	17.8	28/02	0.08	05/09	2.0	0.28	0.11
				2000	1281	118	868	117	0.67	26.5	20/09	0.04	30/06	1.8	0.23	0.05
084014	**Avon Water at Fairholm**		C.A: 265.5 km^2	**64..95**	**1294**		**918**		**7.73**	**397.3**	**13/08 1966**	**0.16**	**17/08 1984**	**20.2**	**3.17**	**0.49**
M.A: SEPA-W	Local No: 104	Sens.: 15.3	B/full: 397.0m^3s^{-1}													
F.A.R:	Level: 54m	UE: <.01	FAI: 0.989													
Comment: Velocity-area station in a very straight uniform reach. Rock platform below a bridge forms the control. All flows contained. Some naturalised flows. Two small reservoirs in the catchment but flow pattern remains responsive. # An impervious catchment - mostly ORS and Carboniferous formations. Hill grazing is the main land use.				1996	981	76	584	64	4.90	92.2	19/12	0.22	19/09	12.7	1.62	0.27
				1997	1189	92	731	80	6.15	162.8	17/02	0.46	27/08	16.1	2.46	0.60
				1998	1618	125	1175	128	9.89	165.2	21/10	0.87	05/06	23.6	5.50	1.22
				1999	1589	123	1130	123	9.51	197.2	06/12	0.67	24/08	26.0	3.95	0.96
				2000	1553	120	1188	129	9.98	212.0	25/10	0.67	23/07	27.1	4.30	0.87
084007	**South Calder Wtr at Forgewood**		C.A: 93.0 km^2	**65..95**	**962**		**665**		**1.98**	**61.1**	**24/01 1993**	**0.26**	**17/10 1994**	**3.8**	**1.38**	**0.71**
M.A: SEPA-W	Local No: 105	Sens.: 7.3	B/full: 87.9m^3s^{-1}													
F.A.R: EI	Level: 44m	UE: .06	FAI: 0.989													
Comment: Compound Crump profile weir (centre: 3.658m, flanks: 13.405m). Gradient sufficient to avoid drowning. All flows contained. Theoretical rating confirmed by gaugings. Flow pattern influenced by industrial abstractions and discharges - net import of water from the Clyde. # Relatively subdued topography developed on sedimentary formations of Carboniferous age (chiefly Coal Measures); extensive Drift. Land use: arable and pasture plus significant woodland and > 15% urban - the gauging station is located in Motherwell.				1996	730	76	444	67	1.31	11.9	18/12	0.45	29/08	2.3	0.92	0.51
				1997	917	95	598	90	1.76	23.9	14/08	0.62	11/08	3.0	1.30	0.73
				1998	1187	123	986	148	2.91	30.0	08/04	0.83	05/07	5.2	2.26	1.15
				1999	1087	113	692	104	2.04	23.0	03/12	0.62	14/09	4.1	1.37	0.71
				2000	1211	126	734	110	2.16	25.3	07/11	0.62	22/07	4.4	1.48	0.74
084005	**Clyde at Blairston**		C.A: 1704.2 km^2	**58..95**	**1169**		**778**		**42.05**	**830.9**	**12/12 1994**	**3.37**	**23/08 1984**	**99.0**	**24.01**	**7.72**
M.A: SEPA-W	Local No: 108	Sens.: 6.9	B/full: 830.0m^3s^{-1}													
F.A.R: H	Level: 18m	UE: .01	FAI: 0.968													
Comment: Velocity profile slightly uneven due to u/s bend. Control: piers of redundant rail bridge 300m d/s. Steep grass and tree covered banks. Rated by c/m to 3.4m, just below max. recorded stage. Several upland trib impounded for PWS. River hydropower schemes u/s of New Lanark. Some naturalised flows available. Station burnt down Feb 1997, temp. gauge installed, level data yet to be processed. # Geology: predominantly Ordovician s'sts and shales. Lowther Hills in S are Silurian L'st, other upland areas Carboniferous basaltic lavas. Variable Drift cover. Land use: hill grazing and moorland on high ground, some afforestation; fruit farming in valley. Rapid urbanisation in lower catchment.				1996	962	82	610	78	32.89	*293.3*	*19/12*	4.60	20/09	75.2	18.49	5.37
				1997	1148	98										
				1998	1421	122	993	128	53.66	346.4	27/12	7.69	05/06	111.7	37.93	11.32
				1999	1414	121	954	123	51.57	*381.9*	*09/12*	6.67	05/09	127.3	28.27	8.22
				2000	1439	123	1015	130	54.70	390.0	25/10	6.41	24/07	133.3	30.20	7.60
084024	**North Calder Wtr at Hillend**		C.A: 19.9 km^2	**72..95**	**1100**		**547**		**0.34**	**3.2**	**12/12 1994**	**>0.00**	**06/03 1988**	**0.8**	**0.19**	**0.10**
M.A: SEPA-W	Local No: 128	Sens.:														
F.A.R: S	Level: 168m	UE:	FAI:													
Comment: Flat V fibre-glass Crump weir. Susceptible to minor weed growth in summer. Channel flooded out at extreme high flows (very rare). Flow is totally artificial, being controlled by releases from Hillend Res. (but flood releases via second spillway bypass). # Geology: mainly Upper and Lower Coal Measures, with some quartz-dolerite intrusions.				1996	895	81	523	96	0.33	2.0	12/02	0.08	25/01	0.7	0.19	0.14
				1997	1054	96	481	88	0.30	1.9	11/12	>0.00	04/06	0.6	0.22	0.10
				1998	1397	127	796	146	0.50	2.4	17/10	0.18	08/07	1.0	0.33	0.18
				1999	1229	112	622	114	0.39	2.5	03/12	0.16	04/11	0.9	0.25	0.16
				2000	1397	127										
084027	**North Calder Wtr at Calderbank**		C.A: 60.6 km^2	**68..95**	**1022**		**485**		**0.93**	**31.3**	**06/10 1990**	**>0.00**	**01/07 1987**	**1.4**	**0.35**	**0.01**
M.A: SEPA-W	Local No: 117	Sens.:														
F.A.R: S	Level: m	UE:	FAI:													
Comment: Fibre-glass flume for low flows, broad-crested control for higher flows. Flume is susceptible to blockage by vandals (but checked daily). High flow calibration is poorly defined - further gauging planned. Canal offtake just u/s. # Urbanised catchment with rough grazing remaining on uplands. Reservoired headwaters. Geology: principally Upper and Lower Coal Measures overlain by Boulder Clay and localised riverine deposits.				1996	820	80	399	82	0.77	12.5	12/02	0.08	14/09	1.6	0.32	0.09
				1997	976	95	467	96	0.90	11.6	11/12	0.14	19/07	1.9	0.37	0.16
				1998	1301	127	876	181	1.68	17.2	08/04	0.22	28/09	5.9	0.57	0.29
				1999	1173	115	1063	219	2.04	27.5	03/12	0.22	29/07	7.7	0.45	0.26
				2000	1307	128	838	173	1.61	18.2	07/11	0.27	16/05	5.4	0.54	0.34
084019	**North Calder Wtr at Calderpark**		C.A: 129.8 km^2	**63..95**	**1003**		**600**		**2.47**	**134.3**	**12/12 1994**	**0.06**	**10/08 1995**	**5.3**	**1.49**	**0.56**
M.A: SEPA-W	Local No: 102	Sens.: 8.5	B/full: 21.0m^3s^{-1}													
F.A.R: RP	Level: 13m	UE: .10	FAI: 0.930													
Comment: Recorder sited on U-shaped bend so velocity profile is not symmetrical. Outer bank is a steep cliff being undercut by river. The inner bank is quite steep. Rated by c/m to 1.12m. Monkland Canal drains through catchment. # Lies in Scottish central lowlands east of Glasgow. Contains several small storage lochs. Geology: sedimentary rocks of Carboniferous age.				1996	782	78	405	68	1.66	24.3	12/02	0.36	30/08	3.9	0.81	0.39
				1997	920	92	479	80	1.97	26.6	11/12	0.48	02/10	3.9	1.22	0.57
				1998	1245	124	754	126	3.10	41.4	08/04	0.69	05/06	6.4	1.99	0.81
				1999	1136	113	622	104	2.56	67.0	03/12	0.52	05/05	6.0	1.08	0.60
				2000	1244	124	777	130	3.19	32.6d	06/11	0.44	20/07	6.9	1.75	0.68
084008	**Rotten Calder Wtr at Redlees**		C.A: 51.3 km^2	**66..95**	**1224**		**958**		**1.56**	**60.8**	**13/01 1984**	**0.07**	**11/08 1968**	**4.0**	**0.68**	**0.17**
M.A: SEPA-W	Local No: 103	Sens.: 11.9	S/full: 72.0m^3s^{-1}													
F.A.R: E	Level: 17m	UE: .06	FAI: 0.998													
Comment: Compound Crump profile weir (central crest: 1.83m, flanks: 4.88m). Theoretical rating confirmed by gaugings. River gradient obviates drowning. All flows contained. Runoff augmented by sewage and industrial effluent. # A mainly impervious catchment (Carboniferous deposits predominate; Drift cover). Moorland and hill pasture in the headwaters, some significant urban growth in the lower catchment (East Kilbride).				1996	914	75	729	76	1.18	20.5	06/11	0.10	29/12	3.1	0.44	0.18
				1997	1086	89	815	85	1.33	37.8	17/02	0.09	26/08	3.3	0.50	0.13
				1998	1524	125	1323	138	2.15	43.2	21/10	0.18	08/10	5.5	0.83	0.26
				1999	1532	125	1721	180	2.80	48.2	03/12	0.24	20/10	6.8	1.88	0.43
				2000	1476	121	755	79	1.22	29.1	25/10	**0.05**	**21/04**	3.1	0.51	0.11
084013	**Clyde at Daldowie**		C.A: 1903.1 km^2	**63..95**	**1158**		**785**		**47.37**	**1107.0**	**12/12 1994**	**6.09**	**19/08 1984**	**109.3**	**27.56**	**9.61**
M.A: SEPA-W	Local No: 101	Sens.: 4.7	B/full: 370.0m^3s^{-1}													
F.A.R: E	Level: 8m	UE: .02	FAI: 0.966													
Comment: Velocity-area station; lowest on the Clyde. Well calibrated. Cableway. Some naturalised flows available. # Large catchment developed on a mixed geology - Ordovician (in the south) to Carboniferous with Drift cover below the headwaters. Hill pasture is the major land use; some mixed farming and urbanisation in the lower valley.				1996	945	82	631	80	38.00	339.8	19/12	6.86	20/09	91.4	20.88	8.05
				1997	1128	97	769	98	46.38	408.6	20/02	12.47	04/06	106.6	25.86	13.64
				1998	1409	122	1067	136	64.36	430.9	11/02	12.41	26/05	135.0	45.44	15.67
				1999	1393	120	1110	141	66.99	515.4	03/12	15.15	24/08	157.9	37.82	17.79
				2000	1423	123	1170	149	70.40	475.3	25/10	13.01	23/07	158.3	41.45	15.43
084016	**Luggie Water at Condorrat**		C.A: 33.9 km^2	**66..95**	**1103**		**820**		**0.88**	**51.3**	**11/12 1994**	**0.06**	**08/08 1967**	**2.0**	**0.48**	**0.14**
M.A: SEPA-W	Local No: 106	Sens.: 13.7	B/full: 32.0m^3s^{-1}													
F.A.R: N	Level: 68m	UE: .04	FAI: 0.998													
Comment: Compound broad-crested weir, central low flow notch. Calibrated by current metering. Data prior to March 1968 is of poor quality. No controlled storages but significant local depressions and boggy areas. # Geology: mostly Coal Measures with intrusive basalt and substantial Drift. Much of the catchment is agricultural in character but urban development in the north has been rapid (Cumbernauld).				1996	904	82	627	76	0.67	17.0	28/10	0.09	24/09	1.6	0.34	0.11
				1997	1010	92	696	85	0.75	19.5	21/02	0.12	24/08	1.5	0.44	0.16
				1998	1434	130	1132	138	1.22	27.6	22/10	0.23	07/07	2.5	0.74	0.29
				1999	1256	114	926	113	1.00	44.9	03/12	0.15	03/09	2.2	0.47	0.19
				2000	1331	121	1012	123	1.08	32.4	29/10	0.14	20/07	2.4	0.57	0.15

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak / Min. daily flow (m^3s^{-1})		Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
084025	**Luggie Water at Oxgang** C.A: 87.7 km^2	**75..95**	**1115**		**885**		**2.46**	**110.0**	**11/12**	**0.12**	**26/07**	**5.8**	**1.30**	**0.34**
M.A: SEPA-W	Local No: 130 Sens.: B/full: 77.8m^3s^{-1}								**1994**		**1984**			
F.A.R: E	Level: 38m UE: .06 FAI: 0.999													
Comment: Velocity-area station with informal Flat V control. Some sign of weir undercutting in 1992, not thought to affect flows. Most flows contained but some spillage in flood conditions. # Geology: predominantly Coal Measures with some dolerite and basalt intrusions. Mixed land use, farming/ urban development.		1996	873	78	622	70	1.73	27.7	28/10	0.27	09/09	4.0	0.93	0.30
		1997	976	88	689	78	1.92	31.5	21/02	0.34	25/08	4.2	1.06	0.40
		1998	1396	125	1263	143	3.51	42.2	23/10	0.56	05/06	7.4	2.36	0.74
		1999	1235	111	1055	119	2.93	59.7	03/12	0.46	03/09	7.1	1.33	0.57
		2000	1282	115	1106	125	3.07	48.2	29/10	0.39	21/07	7.1	1.71	0.49
084023	**Bothlin Burn at Auchengeich** C.A: 35.7 km^2	**73..95**	**1056**		**700**		**0.79**	**17.4**	**11/12**	**0.08**	**20/07**	**1.8**	**0.47**	**0.16**
M.A: SEPA-W	Local No: 127 Sens.: B/full: 36.1m^3s^{-1}								**1994**		**1989**			
F.A.R: E	Level: 57m UE: .09 FAI: 1.000													
Comment: Crump profile weir. Theoretically rated. Flow contained over the full range. Sensibly natural regime but motorway (M73) runoff and STW effluent may influence flow pattern. # A small undulating catchment, containing three old mining villages, developed on Scottish Carboniferous L'st (overlain with Drift).		1996	834	79	511	73	0.58	6.2	28/10	0.15	10/10	1.2	0.39	0.18
		1997	930	88	564	81	0.64	8.1	20/02	0.10	26/08	1.4	0.41	0.15
		1998	1335	126	900	129	1.02	10.9	22/10	0.23	07/07	2.0	0.76	0.27
		1999	1202	114	733	105	0.83	11.2	03/12	0.14	23/08	1.9	0.46	0.18
		2000	1238	117	800	114	0.90	8.7	29/10	0.10	21/07	2.1	0.60	0.12
084020	**Glazert Water at Milton of Campsie** C.A: 51.9 km^2	**68..95**	**1618**		**1234**		**2.03**	**87.1**	**11/12**	**0.06**	**26/08**	**5.0**	**1.01**	**0.17**
M.A: SEPA-W	Local No: 126 Sens.: B/full: 137.4m^3s^{-1}								**1994**		**1984**			
F.A.R: E	Level: 39m UE: <.01 FAI: 0.995													
Comment: Velocity-area station; broad-crested weir with rectangular low flow notch acts as the control (gaugings confirm the theoretical rating but significant structure erosion evident - especially following the 1990 spates; reconstruction scheduled). No significant lochs or storages. Some (1970s) naturalised flows available. # An upland catchment draining the Campsie Fells. Geology: Carboniferous series (principally the Scottish Carboniferous L'st) predominate - overlain by Drift. Very thinly populated. A small area is given over to forestry.		1996	1372	85											
		1997	1430	88	1093	89	1.80	43.7	19/02	0.13	26/08	4.5	0.86	0.18
		1998	2052	127	1753	142	2.89	67.3	11/02	0.24	05/06	6.5	1.67	0.34
		1999	1751	108	1489	121	2.45	57.0	30/11	0.21	24/08	6.3	1.21	0.32
		2000	1815	112	1429	116	2.35	52.9	25/10	0.11	27/07	5.7	1.17	0.17
084015	**Kelvin at Dryfield** C.A: 235.4 km^2	**60..95**	**1315**		**899**		**6.71**	**91.5**	**12/12**	**0.34**	**25/09**	**15.5**	**3.99**	**1.17**
M.A: SEPA-W	Local No: 120 Sens.: 7.1 B/full: 189.5m^3s^{-1}								**1994**		**1986**			
F.A.R: E	Level: 31m UE: .05 FAI: 0.981													
Comment: Recorder sited in straight even reach where erosion has made banks very steep. The river was canalised during last war and floodbanks made on both banks from dredged material. The section is affected by weed growth and requires constant attention. Rated by c/m measurements up to 2.97m. Cableway installed in 1960 so no high measurements prior to this date. # Catchment in the low lying central valley of Scotland. Geology: Millstone Grit and coal bearing rocks of Carboniferous age.		1996	1057	80	804	89	5.98	66.0	28/10	1.25	07/04	12.3	3.84	1.64
		1997	1149	87	919	102	6.86	55.2	12/02	1.50	22/04	13.2	4.84	2.15
		1998	1648	125	1389	155	10.37	68.1	11/02	2.31	19/05	20.5	7.75	2.62
		1999	1432	109	1196	133	8.93	64.5	30/11	2.04	05/05	18.8	5.69	3.14
		2000	1479	112										
084026	**Allander Water at Milngavie** C.A: 32.8 km^2	**74..95**	**1535**		**1300**		**1.35**	**49.8**	**10/03**	**0.01**	**14/07**	**3.2**	**0.70**	**0.12**
M.A: SEPA-W	Local No: 129 Sens.: B/full: 14.7m^3s^{-1}								**1990**		**1977**			
F.A.R: S	Level: 34m UE: .04 FAI: 0.935													
Comment: Velocity-area station with Flat V low flow control (installed 1973). The catchment contains a number of natural and artificial storages but the flow regime remains responsive. # Hilly catchment developed mostly on Carboniferous formations (basaltic lava and Scottish Carboniferous L'st predominate); some Drift. Upland grazing is the main land use; some afforestation and also urban development (Milngavie) near the outfall.		1996	1344	88	925	71	0.96	36.0	28/10	0.07	23/09	2.3	0.46	0.08
		1997	1343	87	878	68	0.91	18.6	19/02	0.06	26/08	2.1	0.45	0.08
		1998	1957	127	1610	124	1.67	33.3	11/02	0.13	28/05	3.7	1.05	0.19
		1999	1852	121	1427	110	1.48	28.6	03/12	0.18	11/06	3.6	0.77	0.23
		2000	1832	119	1651	127	1.71	34.1	24/09	0.09	22/07	3.9	1.07	0.12
084001	**Kelvin at Killermont** C.A: 335.1 km^2	**48..95**	**1259**		**796**		**8.45**	**265.7**	**12/12**	**0.74**	**17/07**	**19.5**	**5.15**	**1.67**
M.A: SEPA-W	Local No: 121 Sens.: 6.6 B/full: 31.4m^3s^{-1}								**1994**		**1962**			
F.A.R: E	Level: 27m UE: .06 FAI: 0.975													
Comment: Velocity-area station with channel control; vigorous seasonal weedgrowth. All flows contained within steep banks. Station moved 300m u/s (from Killermont) in 1962. Forth and Clyde canal drains through the catchment. Some monthly naturalised flows available. # The main channel runs along the northern edge of the Central Lowlands taking tributaries from the faulted igneous block to the north - remainder of catchment is chiefly Carboniferous sediments and Drift. Mixed land use: moorland to urban concentrations.		1996	1080	86	611	77	6.47	71.7	28/10	1.00	22/09	14.0	3.60	1.33
		1997	1157	92	620	78	6.59	65.8	12/02	1.30	26/08	14.9	3.94	1.61
		1998	1669	133	956	120	10.16	84.7	12/02	1.69	05/06	22.2	7.13	2.19
		1999	1481	118	881	111	9.37	77.6	30/11	1.85	01/09	21.0	5.28	2.36
		2000	1510	120	884	111	9.37	80.8	01/02	0.92	27/07	22.8	5.52	1.36
084036	**Earn Water at Letham** C.A: 19.8 km^2	**91..95**	**1633**		**1395**		**0.88**	**67.3**	**18/03**	**0.01**	**31/05**	**2.0**	**0.45**	**0.06**
M.A: SEPA-W	Local No: Sens.:								**1991**		**1991**			
F.A.R: N	Level: m UE: FAI:													
Comment: Velocity-area station with open channel section. Quick, responsive flow regime. # Geology: extrusive igneous rocks overlain with Boulder Clay, also local outcrops of Carboniferous rocks of Upper L'st Group. Small, rural catchment. A number of small PWS reservoirs including Lochcraig Res. and Bennen lochan are located in catchment.		1996	1251	77	*854*	61	0.53					1.2	0.26	0.05
		1997	1348	83	1038	74	0.65	11.0	17/09	0.02	26/08	1.6	0.37	0.03
		1998	1936	119	1808	130	1.14	12.6d	11/02	0.09	05/06	2.7	0.70	0.13
		1999	1944	119	1732	124	1.09	31.0	30/11	0.09	25/06	2.6	0.50	0.14
		2000	1834	112	1617	116	1.01	18.8	02/03	0.01	22/07	2.5	0.48	0.04
084035	**Kittoch Water at Waterside** C.A: 16.8 km^2	**91..95**	**1342**		**1224**		**0.65**	**25.2**	**26/10**	**0.06**	**28/05**	**1.5**	**0.34**	**0.10**
M.A: SEPA-W	Local No: Sens.:								**1995**		**1991**			
F.A.R: N	Level: m UE: FAI:													
Comment: Velocity-area station with open channel section. Flood warning station. Very minor impact from sewage works u/s of catchment. The urban drainage system produces misleading water balance. # Carboniferous Coal Measures and outcrops of Basalt overlain by Drift deposits. Small, rural catchment having undergone rapid land use change since the expansion of East Kilbride in the 1960's.		1996	931	69	795	65	0.42	14.9	06/11	0.08	07/09	0.9	0.23	0.09
		1997	1094	82	1039	85	0.55	18.1	17/02	0.11	20/07	1.0	0.31	0.13
		1998	1511	113	1391	114	0.74	21.2	16/10	0.13	26/05	1.6	0.42	0.16
		1999	1521	113	1415	116	0.75	28.6	03/12	0.11	02/09	1.8	0.33	0.13
		2000	1412	105	1050	86	0.56	27.4	29/10	>0.00	01/07	1.5	0.21	0.01
084030	**White Cart Water at Overlee** C.A: 111.8 km^2	**81..95**	**1499**		**1049**		**3.72**	**152.7**	**31/12**	**0.21**	**20/08**	**9.7**	**1.62**	**0.40**
M.A: SEPA-W	Local No: 160 Sens.:								**1983**		**1984**			
F.A.R: S	Level: 46m UE: FAI:													
Comment: Rectangular thin-plate low flow notch in a broad-crested (V cross-section) weir. Confirmatory gaugings not yet available for the full flow range. Good fall below weir,flows remain modular. Thin-plate damaged and removed in 1999. Frequent flooding d/s of the gauge reflects flashy nature of the river. There are several reservoirs and lochs within the catchment. # Geology: mostly basaltic lava and Carboniferous L'st overlain with Boulder Clay and river gravels along main river channel. Land use: predominantly grazing, however, there has been rapid urbanisation of lower catchment and upper catchment is becoming forested.		1996	1097	73	640	61	2.26	53.4	12/10	0.26	21/09	5.6	1.01	0.31
		1997	1240	83	699	67	2.48	56.6	17/02	0.37	17/08	5.9	1.24	0.43
		1998	1756	117	1081	103	3.83	82.8	21/10	0.26	05/06	9.5	1.94	0.38
		1999	1780	119	1026	98	3.64	98.3	30/11		24/08	10.5	1.38	0.20
		2000	1654	110	1255	120	4.44	96.6	29/10	0.41	22/07	11.5	1.90	0.51
084033	**White Cart Water at MacQuisten Bridge** C.A: 120.0 km^2	**91..95**	**1495**		**1042**		**3.97**	**108.7**	**11/12**	**0.24**	**07/08**	**9.6**	**1.81**	**0.35**
M.A: SEPA-W	Local No: Sens.:								**1994**		**1995**			
F.A.R:	Level: m UE: FAI:													
Comment: Velocity-area station with well confined open channel. Very responsive, natural regime. Catchment prone to frequent flooding. Flood warning station. A number of small PWS reservoirs in upper reaches but have insignificant effect at station. # Predominantly Drift covered with outcrops of Carboniferous Coal Measures and basalts. Rural catchment undergoing land use changes: afforestation in upper reaches and rapid urban expansion of East Kilbride and Castlemilk.		1996	1068	71	*600*	58	2.28					5.4	1.04	0.18
		1997	1206	81	708	68	2.69	68.5	17/02	0.29	26/08	6.1	1.34	0.40
		1998	1707	114	1135	109	4.32	100.8	21/10	0.47	05/06	10.4	2.35	0.59
		1999	1728	116	1120	107	4.26	109.7	30/11	0.28	23/08	11.6	1.76	0.43
		2000	1608	108	1086	104	4.12	97.8	29/10	0.26	22/07	10.2	1.84	0.35
084034	**Auldhouse Burn at Spiers Bridge** C.A: 17.2 km^2	**91..95**	**1504**		**559**		**0.31**	**15.8**	**11/12**	**0.04**	**07/09**	**0.6**	**0.17**	**0.08**
M.A: SEPA-W	Local No: Sens.:								**1994**		**1991**			
F.A.R: N	Level: m UE: FAI:													
Comment: Velocity-area station with artificial control: broad crested weir. No significant abstractions or discharges, however, proportion of runoff diverted out of catchment due to urban drainage. # Carboniferous Coal Measures and outcrops of Basalt, covered by Drift deposits. Significant urbanisation.		1996	1118	74	370	66	0.20	3.3	12/10	0.05	20/07	0.3	0.14	0.06
		1997	1237	82	389	70	0.21	4.1	17/02	0.05	08/07	0.4	0.14	0.07
		1998	1724	115	568	101	0.31	8.4	21/10	0.04	07/07	0.7	0.19	0.06
		1999	1751	116	632	113	0.34	13.5	03/12	0.04	21/08	0.8	0.18	0.07
		2000	1632	109	548	98	0.30	10.8	29/10	0.03	26/07	0.6	0.17	0.07

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
084012 White Cart Water at Hawkhead C.A: 234.9 km²	**63..95**	**1304**		**908**		**6.76**	**187.1**	**18/12 1966**	**0.15**	**17/08 1995**	**17.3**	**3.26**	**0.87**
M.A: SEPA-W Local No: 109 Sens.: 3.9 B/full: 155.0m³s⁻¹													
F.A.R: S Level: 5m UE: .13 FAI: 0.947													
Comment: Velocity-area station in a straight reach of uniform cross-section. Rock bar control but weed growth causes low flow rating variations. Complex water utilisation; some naturalised flows available. # Carboniferous rocks (basalt in the headwaters) predominate; Drift and terrace deposits also. Much of the catchment is open pasture (with several small lochs) but the northern part is heavily urbanised (Glasgow).	1996	1079	83	616	68	4.57	82.0	12/10	0.26	16/09	11.3	1.79	0.33
	1997	1212	93	705	78	5.25	103.5	17/02	0.26	26/08	12.1	2.45	0.44
	1998	1695	130	1160	128	8.64	124.1	11/02	0.69	05/06	20.7	5.28	1.00
	1999	1703	131	1132	125	8.44	145.6	03/12	0.50	21/08	23.1	3.98	0.77
	2000	1583	121	1059	117	7.87	119.5	29/10	0.39	23/07	19.5	4.04	0.60
084017 Black Cart Water at Milliken Park C.A: 103.1 km²	**67..95**	**1787**		**1430**		**4.67**	**110.1**	**11/12 1994**	**0.08**	**27/08 1984**	**12.1**	**2.69**	**0.41**
M.A: SEPA-W Local No: 111 Sens.: 19.0 B/full: 47.0m³s⁻¹													
F.A.R: S Level: 25m UE: <.01 FAI: 0.793													
Comment: Velocity-area station with informal (dished) concrete control, length: 26.52m. Stable rating. Overtopping of rb can occur when stage exceeds 1m. Several lochs and reservoirs (e.g. Rowbanks) provide storage, flows signif. affected by operation of Castle Semple Loch and Barr Loch (fed by Calder Water), evident on the hydrograph trace. Monthly naturalised flows available. # A wet, principally impervious catchment - Carboniferous basalt and igneous intrusions, overlain by Boulder Clay. Peat in some upland areas, river gravel on floodplains. Rural land use, urbanisation in valley.	1996	1608	90	1247	87	4.07	31.4	28/10	0.24	25/09	11.9	1.78	0.43
	1997	1599	89	1273	89	4.16	31.0	06/12	0.32	30/08	11.1	2.01	0.51
	1998	2223	124	1935	135	6.32	54.0	11/02	0.42	03/06	14.4	4.70	0.72
	1999	2116	118	1888	132	6.17	42.7	03/12	0.48	20/08	15.2	3.91	0.54
	2000	1999	112	1630	114	5.31	44.8	01/02	0.31	26/07	13.8	3.18	0.42
085003 Falloch at Glen Falloch C.A: 80.3 km²	**70..95**	**3003**		**2291**		**5.83**	**226.7**	**22/10 1971**	**0.02**	**21/08 1995**	**16.4**	**2.18**	**0.25**
M.A: SEPA-W Local No: 124 Sens.:													
F.A.R: N Level: 10m UE: <.01 FAI: 0.993													
Comment: Velocity-area station with long broad-crested weir (with rectangular notch) as low flow control - installed Feb 1975. Damage to part of main crest results in a small discharge bypassing the central notch. All but very high flows contained. No significant abstractions or discharges. Very responsive regime. # Very wet mountainous catchment draining southern slopes of Benn Oss and northern slopes of Beinn a Chroin and Beinn Chabair. Developed on ancient metamorphic formations with isolated outcrops of igneous intrusions. Peat deposits in upland areas. Small lochans in some headwaters, but have little affect on flows.	1996	2375	79	1960	86	4.98	149.1	04/11	0.03	20/09	15.3	1.65	0.10
	1997	2858	95	2309	101	5.88	185.3	19/02	0.05	04/06	16.4	1.70	0.18
	1998	3243	108	2934	128	7.47	176.9	11/02	0.05	05/06	20.9	3.22	0.15
	1999	3552	118	3364	147	8.57	203.4	08/09	0.05	09/08	27.2	3.43	0.25
	2000	3051	102	2968	130	7.54	162.3	29/10	0.10	25/07	22.5	2.33	0.25
085004 Luss Water at Luss C.A: 35.3 km²	**76..95**	**2507**		**2427**		**2.72**	**111.8**	**20/08 1987**	**0.06**	**21/08 1995**	**7.0**	**1.43**	**0.19**
M.A: SEPA-W Local No: 132 Sens.: B/full: 57.2m³s⁻¹													
F.A.R: N Level: m UE: FAI:													
Comment: Velocity-area station with artificial low flow control: broad-crested weir with low flow notch, slight damage to centre section repaired in autumn 1992. Very responsive, natural regime. # A very wet, mountainous catchment developed mainly on Dalradian schists, overlain by Peat in upland areas and localised gravels in valleys.	1996	2046	82	2109	87	2.35	34.0	04/11	**0.04**	**19/09**	6.9	1.10	0.09
	1997	2144	86	2075	85	2.32	54.0	16/09	0.11	25/07	5.6	1.05	0.17
	1998	2683	107	2665	110	2.98	59.0	20/10	0.18	05/06	7.5	1.71	0.28
	1999	2810	112	2764	114	3.09	54.7	30/11	0.18	24/08	8.4	1.74	0.37
	2000	2722	109	2603	107	2.91	53.9	17/10	0.10	24/07	7.8	1.57	0.18
085002 Endrick Water at Galdrew C.A: 219.9 km²	**63..95**	**1498**		**1042**		**7.27**	**142.4**	**30/09 1985**	**0.28**	**20/06 1970**	**19.0**	**3.19**	**0.59**
M.A: SEPA-W Local No: 113 Sens.: 10.0 B/full: 133.8m³s⁻¹													
F.A.R: P Level: 10m UE: <.01 FAI: 0.984													
Comment: Velocity-area station with channel control. Low and medium flows considered reliable but flood discharges are of a lesser accuracy (due to overspill on to the lb floodplain and a curved approach to the measuring reach). Runoff is diminished by the export of water from Carron Res. into the Forth system. Some naturalised flows available. # An upland catchment, draining from the Campsie Fells, developed on ORS overlain with Drift; large tracts of sand and gravel also.	1996	1346	90	920	88	6.39	133.8	28/10	0.56	21/09	16.2	2.42	0.69
	1997	1402	94	944	91	6.58	124.9	17/02	0.69	19/08	16.7	2.57	0.79
	1998	1946	130	1379	132	9.61	135.1	21/10	0.98	05/06	23.3	5.08	1.17
	1999	1800	120	1329	128	9.27	133.9	22/12	0.77	23/08	25.9	4.01	0.98
	2000	1767	118	1273	122	8.85	128.7	29/10	0.69	24/07	23.0	3.83	0.83
085001 Leven at Linnbrane C.A: 784.3 km²	**63..95**	**2112**		**1731**		**43.05**	**196.8**	**11/03 1990**	**3.31**	**29/08 1984**	**83.9**	**39.78**	**8.21**
M.A: SEPA-W Local No: 112 Sens.: 3.9 B/full: 124.6m³s⁻¹													
F.A.R: S Level: 5m UE: <.01 FAI: 0.689													
Comment: Velocity-area station with channel control at outflow from Loch Lomond. Stable rating but erosion caused by major floods in 1990 necessitated recalibration. Natural regime until loch outfall control weir built in 1971, now substantially regulated. Naturalised monthly flows Oct 1963 - Sept 1974. # Large, wet, upland catchment. Geology dominated by ancient metamorphic formations - overlain by Drift in the west.	1996	1791	85	1607	93	39.84	143.0	06/11	8.81	25/06	72.1	37.62	9.51
	1997	1965	93	1684	97	41.88	146.8	02/03	8.81	28/08	82.1	20.48	11.13
	1998	2471	117	2175	126	54.09	125.5	16/02	8.09	09/06	96.7	53.98	9.45
	1999	2484	118	2107	122	52.39	140.8	09/12	7.24	09/08	102.8	51.15	8.24
	2000	2344	111	2029	117	50.33	126.5	08/01	7.05	09/05	101.4	55.44	7.56
086001 Little Eachaig at Dalinlongart C.A: 30.8 km²	**68..95**	**2383**		**1750**		**1.71**	**91.2**	**03/11 1979**	**0.01**	**14/07 1977**	**4.6**	**0.75**	**0.08**
M.A: SEPA-W Local No: 116 Sens.: 22.5 B/full: 83.1m³s⁻¹													
F.A.R: I Level: 10m UE: <.01 FAI: 1.000													
Comment: Velocity-area station with compound artificial control (low flow notch, broad-crested flanks). Cableway on site. Flood flows contained. Natural flow regime but catchwaters divert a small runoff volume to Loch Tarsan. Very responsive flow pattern. # A compact, steep, mountainous catchment - very wet - developed on ancient metamorphic formations; some Drift.	1996	2272	95	*1776*	101	1.73					4.9	0.65	0.11
	1997	2194	92	1699	97	1.66	33.8	06/12	0.09	30/06	4.7	0.62	0.12
	1998	2862	120	2394	137	2.34	84.9	20/10	0.10	05/06	5.7	1.21	0.15
	1999	2978	125	2757	158	2.69	45.8	22/12	0.12	11/08	7.3	1.45	0.22
	2000	2814	118	2057	118	2.00	15.0d	11/09	0.06	24/07	5.5	0.74	0.10
089002 Linne nam Beathach at Victoria Bridge C.A: 50.5 km²	**81..95**	**3141**		**3067**		**4.91**	**167.7**	**20/09 1989**	**0.04**	**27/08 1984**	**12.8**	**1.76**	**0.18**
M.A: SEPA-W Local No: Sens.:													
F.A.R: N Level: m UE: FAI:													
Comment: Velocity-area station with a spillway crested weir. Calibration good at low flows. Initially installed as part of HEP programme. No artificial influences to the flow regime. # Rural, upland catchment draining to Loch Tulla. Geology: Dalradian metamorphics with igneous extrusions. A couple of small lochs in the catchment.	1996	2413	77	*2045*	67	3.27					9.6	1.02	0.10
	1997	3042	97	2641	86	4.23	*143.2*	*19/02*	0.08	05/06	11.7	1.09	0.21
	1998	3479	111	3176	104	5.09	138.1	11/02	0.09	05/06	12.1	2.18	0.16
	1999	3544	113	3393	111	5.43	120.3	06/12	0.06	11/08	14.3	2.19	0.27
	2000	3072	98	2993	98	4.78	93.9	30/01	0.07	25/07	13.9	1.68	0.18
089003 Orchy at Glen Orchy C.A: 251.2 km²	**77..95**	*2763*		**2831**		**22.55**	**607.9**	**02/03 1979**	**0.06**	**30/11 1977**	**57.2**	**8.51**	**1.26**
M.A: SEPA-W Local No: 150 Sens.:													
F.A.R: N Level: m UE: FAI:													
Comment: Velocity-area station with low flow control (broad-crested weir). All but very high flows contained. Initially installed as part of HEP programme. Very responsive natural flow regime. # Steep, rural, forested catchment. Geology: Predominantly metamorphic rocks with local occurrences of Dalradian L'st.	1996	2180	79	*2441*	86	19.39					44.0	6.27	1.18
	1997	2737	99	2624	93	20.91	395.0	02/03	0.94	05/06	58.2	7.28	1.71
	1998	3153	114	3162	112	25.19	558.4	11/02	0.63	05/06	64.0	10.38	1.27
	1999	3289	119	*3308*	117	26.35					66.6	11.50	2.02
	2000	2929	106	3215	114	25.54	414.5	01/02	0.71	26/07	72.2	9.06	1.30
089005 Lochy at Invertochy C.A: 47.7 km²	**78..95**	**3095**		**2607**		**3.94**	**227.4**	**02/03 1979**	**0.15**	**04/08 1991**	**10.6**	**1.82**	**0.34**
M.A: SEPA-W Local No: 152 Sens.: 41.5													
F.A.R: N Level: m UE: FAI:													
Comment: Velocity-area station with low flow control (broad-crested weir). Dmfs unavailable June 1995 due to instrument failure. All but the very high flows contained. Initially installed as part of HEP programme. # Linear catchment draining westward from Lochan na Bi. Geology: predominantly Dalradian metamorphics with local outcrops of Middle ORS. Rural catchment with forested slopes.	1996	2440	79	*2108*	81	3.18					9.2	1.27	0.33
	1997	2777	90	2174	83	3.29	34.2	06/12	0.24	04/06	9.4	1.29	0.37
	1998	3183	103	3216	123	4.86	37.1	12/02	0.25	05/06	12.4	2.95	0.36
	1999	3575	116										
	2000	3045	98	3036	116	4.58	223.9	29/10	0.24	26/07	11.1	1.61	0.33
089004 Strae at Glen Strae C.A: 36.2 km²	**78..95**	*2936*		**2600**		**2.98**	**70.7**	**01/04 1991**	**0.11**	**18/05 1980**	**7.7**	**1.44**	**0.20**
M.A: SEPA-W Local No: 151 Sens.:													
F.A.R: N Level: m UE: FAI:													
Comment: Spillway crested weir. Initially installed as part of HEP programme. No significant artificial effects on the flow regime during the early record. High flow rating unconfirmed. # A linear catchment draining to Loch Awe. Geology: predominantly Dalradian metamorphics with local occurrences of Dalradian L'st. Land use: rough grazing.	1996	2416	82										
	1997	2773	94	2278	88	2.61	60.1	15/09	0.14	03/06	7.2	0.94	0.22
	1998	3257	111	2784	107	3.20	69.4	11/02	0.13	04/06	8.0	1.76	0.19
	1999	3404	116										
	2000	2872	98	2496	96	2.86	56.0	31/01	0.17	04/07	7.2	1.41	0.22

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
089007	**Abhainn a' Bheatalch at Braevallich** C.A: 24.1 km^2	**81..95**	**2839**		**2358**		**1.80**	**91.5**	**07/04 1991**	**0.05**	**10/06 1984**	**4.5**	**0.99**	**0.12**
M.A: SEPA-W	Local No: 154 Sens.: 9.8													
F.A.R: N	Level: m UE: FAI:													
Comment: Compound weir. Low flows measured over a broad crest notch; high flows over a long rounded crest with decreasing accuracy. All but highest flows contained. Initially installed as part of HEP programme. No artificial effects on flow regime. # Geology: predominantly Datradian metamorphics with igneous intrusions. A steep, forested catchment draining into Loch Awe.		1996	2278	80	1952	83	1.49	35.0	16/02	0.05	24/09	3.8	0.73	0.13
		1997	2303	81	1972	84	1.51	40.2	05/04	0.08	30/06	4.0	0.64	0.12
		1998	3019	106	2459	104	1.88	68.1	20/10	0.06	05/06	4.5	1.02	0.10
		1999	3174	112	2536	108	1.94	44.3	05/12	0.05	11/08	5.0	1.00	0.11
		2000	2866	101	2308	98	1.76	42.2	17/10	0.07	14/05	4.5	0.83	0.10
089006	**River Avich at Barnaline Lodge** C.A: 32.1 km^2	**80..95**	**2632**		**1905**		**1.94**	**16.4**	**11/04 1991**	**0.12**	**23/08 1995**	**4.3**	**1.47**	**0.25**
M.A: SEPA-W	Local No: Sens.:													
F.A.R: S	Level: m UE: FAI:													
Comment: Compound weir; broad crest low flow notch set in level rounded crest weir with wing walls. Low flows are well rated, accuracy lost progressively with floods above main crest. Initially installed as part of HEP programme. # Geology: predominantly Datradian metamorphics with intrusive and extrusive igneous outcrops. Forested catchment draining into Loch Awe. Catchment dominated by presence of Loch Avich approx. 2km u/s.		1996	2162	82	1543	81	1.57	8.2	03/11	0.15	22/09	3.7	1.15	0.27
		1997	2202	84	1569	82	1.60	6.3	06/12	**0.10**	**30/06**	3.6	1.25	0.17
		1998	2855	108	2235	117	2.28	**20.0**	12/02	0.12	05/06	5.1	1.69	0.21
		1999	3170	120										
		2000	2715	103	1994	105	2.02	12.0	01/02	0.14	30/07	4.9	1.37	0.19

Map 4: NORTH EAST



Area: 22,777 km^2

Average Rainfall (1961–90): 834 mm

Gauging Station Register

Station number		River name	Station name	Grid reference		Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
021032		Glen	Kirknewton	NT	919310	198.9	FVVA	1966..00	880	456	424	717	98	178	73	2.88	0.18	07/94	42.5	.47	6.3	0.32
021031	*	Till	Etal	NT	927396	648.0	VA	1956..80	815	412	403	616	63	129	73	8.47	1.03	08/76	81.3	.58	17.1	1.43
022004	*	Ain	Hawkhill	NU	211129	205.0	VA	1966..80	744	370	374	571	69	119	73	2.40	0.38	07/76	63.9	.46	4.5	0.46
022002	*	Coquet	Bygate	NT	870083	59.5	MIS	1957..80	985	637	348	889	63	352	73	1.20	0.12	09/59	28.6	.47	2.5	0.20
022003	*	Usway Burn	Shillmoor	NT	886077	21.4	TP	1957..80	1039	812	227	1226	79	447	73	0.55	0.05	09/59	15.2	.40	1.3	0.09
022008	*	Alwin	Clennell	NT	925063	27.7	FV	1969–83	953	641	312	1137	70	312	73	0.56	0.06	08/76	13.9	.46	1.2	0.08
022009		Coquet	Rothbury	NU	067016	346.0	VA	1972–00	912	519	393	741	79	264	89	5.69	0.56	08/95		.47	12.0	0.80
022001		Coquet	Morwick	NU	234044	569.8	VA	1963..00	873	470	403	664	98	206	73	8.50	0.80	08/95	139.9	.44	18.6	1.19
022007		Wansbeck	Mitford	NZ	175858	287.3	MIS	1968–00	802	353	449	557	00	133	73	3.21	0.13	08/76	94.8	.37	7.1	0.22
022006		Blyth	Hartford Bridge	NZ	243800	269.4	FVVA	1966..00	709	247	462	450	00	63	73	2.11	0.07	08/76	47.0	.35	4.9	0.12
023011		Kielder Burn	Kielder	NY	644946	58.8	FVVA	1970..00	1277	1032	245	1326	00	644	73	1.92	0.22	08/95	60.4	.34	4.5	0.29
023014	*	North Tyne	Kielder temp	NY	631931	27.0	VA	1960–74	1195	952	243	1256	65	642	64	0.81	0.09	10/72		.35	1.8	0.10
023022		North Tyne	Uglydub	NY	713875	241.5	FV	1982..00	1357	1012	345	1270	00	798	96	7.75	1.15	12/83		.50	16.1	1.49
023005	*	North Tyne	Tarset	NY	776861	284.9	VA	1963–87	1254	886	368	1220	85	537	81	8.01	0.60	08/76	213.8	.33	19.1	0.90
023010	*	Tarset Burn	Greenhaugh	NY	789879	96.0	VA	1970–80	929	575	354	852	79	366	73	1.75	0.12	08/76	61.5	.28	4.3	0.14
023008		Rede	Rede Bridge	NY	868832	343.8	FVVA	1968..00	958	540	418	766	79	251	73	5.89	0.45	08/95	125.8	.33	14.1	0.61
023003		North Tyne	Reaverhill	NY	906732	1007.5	VA	1959..00	1070	657	413	906	00	354	73	20.99	1.36	08/76	402.6	.37	48.0	2.55
023015	*	North Tyne	Barrasford	NY	924721	1043.8	FL	1942..59	996	537	459	653	58	486	53	17.78	1.93	08/55	456.4	.30	42.2	2.39
023009		South Tyne	Alston	NY	716465	118.5	VA	1969..00	1489	1128	361	1751	00	864	71	4.24	0.14	08/95		.28	10.5	0.35
023006		South Tyne	Featherstone	NY	672611	321.9	CC	1966..00	1375	1039	336	1324	00	703	96	10.61	0.89	08/95	248.1	.33	25.4	1.35
023013	*	West Allen	Hindley Wrae	NY	791583	75.1	VA	1971–80	1024	693	331	891	77	541	75	1.65	0.03	05/80	53.2	.27	4.2	0.06
023012	*	East Allen	Wide Eals	NY	802583	88.0	VA	1971–80	1038	771	267	1161	79	592	73	2.15	0.15	08/76	79.6	.35	5.0	0.24
023004		South Tyne	Haydon Bridge	NY	856647	751.1	VA	1962..00	1182	771	411	1073	00	489	96	18.37	1.39	08/95	415.7	.34	43.1	2.08
023023		Tyne	Riding Mill	NZ	032617	2174.5	CB	1989–00	1058	499	559	643	00	387	96	34.41	6.01	08/95		.52	69.1	6.63
023001		Tyne	Bywell	NZ	038617	2175.6	VA	1956..00	1044	653	391	971	00	375	73	45.06	3.41	08/76	883.6	.38	103.5	5.99
023002		Derwent	Eddys Bridge	NZ	041508	118.0	FLB	1954..00	962	284	678	742	60	95	89	1.06	0.11	10/89	42.1	.52	2.1	0.28
023007		Derwent	Rowlands Gill	NZ	168581	242.1	CC	1962..00	855	332	523	726	65	146	73	2.55	0.63	09/79	38.2	.57	5.1	0.81
023018		Ouse Burn	Woolsington	NZ	196700	9.0	VA	1992..00	697	228	469	413	00	147	94	0.06	>0.00	08/95		.33	0.1	>0.00
023016		Ouse Burn	Crag Hall	NZ	254674	55.0	TPB	1989..00	651	167	484	295	00	120	94	0.29	0.02	07/89		.31	0.7	0.03
023017		Team	Team Valley	NZ	249585	61.9		1991..00	705	463	242	607	98	390	92	0.91	0.33	06/91		.62	1.3	0.50
024011		Wear	Burnhope Res.	NY	856395	20.5	TP B	1992–00	1616	903	713	1389	98	455	96	0.59	0.08	09/96		.22	1.7	0.09
024006	*	Rookhope	Eastgate	NY	952390	36.5	CC	1957–80	1167	668	499	1021	79	334	59	0.77	0.03	08/59	24.6	.36	1.8	0.07
024003		Wear	Stanhope	NY	983391	171.9	CC	1958..00	1306	681	625	1029	00	404	73	3.71	0.28	08/95	119.0	.35	8.7	0.49
024004		Bedburn Beck	Bedburn	NZ	118322	74.9	CC	1959..00	894	515	379	840	00	281	75	1.22	0.08	08/95	24.9	.46	2.8	0.15
024008		Wear	Witton Park	NZ	174309	455.0	VA	1972..00	1054	544	510	799	00	349	73	7.84	0.91	08/76	181.5	.44	17.6	1.21
024002	*	Gaunless	Bishop Auckland	NZ	215306	93.0	C	1958–83	727	310	417	474	68	138	73	0.92	0.09	08/76	19.2	.51	1.9	0.14
024007	*	Browney	Lanchester	NZ	165462	44.6	CC	1968–83	747	392	355	585	69	209	73	0.55	0.06	10/70	12.6	.45	1.3	0.07
024005		Browney	Burn Hall	NZ	259387	178.5	CB	1954..00	750	302	448	491	60	139	89	1.71	0.21	10/59	31.0	.51	3.6	0.28
024001		Wear	Sunderland Br	NZ	264376	657.8	CB	1957..00	951	541	410	822	00	294	73	11.28	1.21	09/59	174.6	.42	25.9	1.97
024009		Wear	Chester le Street	NZ	283512	1008.3	FV	1977..00	885	460	425	693	00	271	89	14.70	2.95	07/84	228.0	.47	32.7	3.04
025003		Trout Beck	Moor House	NY	759336	11.4	CC	1957..00	1883	1527	356	2902	79	1051	71	0.55	0.01	08/95	15.5	.15	1.5	0.02
025023		Tees	Cow Green Res	NY	813288	58.2	FV	1971..00	1785	1547	238	2012	00	901	96	2.86	0.40	03/96		.53	6.0	0.48
025012		Harwood Bk	Harwood	NY	849309	25.1	FVVA	1969–00	1617	1236	381	1670	00	873	96	0.98	0.04	08/95	31.2	.23	2.6	0.06
025011	*	Langdon Bk	Langdon	NY	852309	13.0	FV	1969–83	1478	1014	464	1499	79	713	73	0.42	0.02	08/76	15.5	.20	1.1	0.03
025002	*	Tees	Dent Bank	NY	932260	217.3	CC	1956..74	1665	1114	551	1517	67	776	64	7.68	0.21	06/57	280.4	.24	18.8	0.68
025018		Tees	Middleton	NY	950250	242.1	VA	1971..00	1555	1163	392	1468	00	794	73	8.93	2.34	05/89	180.5	.43	19.1	2.51
025022	*	Balder	Balderhead Res	NY	931182	20.4	CC	1974..80	1177	935	242	1180	79	640	75	0.61	0.00	12/76		.27	1.7	
025008		Tees	Barnard Castle	NZ	047166	509.2	CC	1966..00	1341	858	483	1238	00	558	73	13.85	3.05	06/70	225.1	.42	31.0	3.68
025006		Greta	Rutherford Br	NZ	034122	86.1	CC	1960–00	1135	829	306	1177	00	530	73	2.26	0.04	08/95	73.6	.22	5.9	0.11
025010	*	Baydale Beck	Mowden Bridge	NZ	260156	31.1	MIS	1967..74	646	224	422	334	69	60	73	0.22	0.01	06/73	6.0	.28	0.4	0.01
025001		Tees	Broken Scar	NZ	259137	818.4	CC	1956–00	1156	651	505	925	00	362	73	16.89	0.46	08/59	362.2	.32	41.0	1.74
025007	*	Clow Beck	Croft	NZ	282101	78.2	TP	1961–80	727	300	427	471	79	123	73	0.74	0.06	08/76	13.8	.55	1.7	0.09
025021		Skerne	Bradbury	NZ	318285	70.1	VA	1973..00	673	171	502	301	79	50	89	0.38	0.04	09/90	5.8	.43	0.8	0.05
025020		Skerne	Preston le Skerne	NZ	292238	147.0	VA	1972..00	655	177	478	324	79	57	89	0.83	0.08	08/90	17.2	.40	1.8	0.10
025004		Skerne	South Park	NZ	284129	250.1	CB	1956..00	661	199	462	336	69	75	89	1.58	0.29	08/76	21.0	.51	3.3	0.36
025009		Tees	Low Moor	NZ	364105	1264.0	VA	1969..00	977	469	508	780	00	284	75	18.79	2.37	08/76	341.8	.38	44.5	2.88
025019	*	Leven	Easby	NZ	585087	14.8	FV	1971–96	803	405	398	650	79	177	89	0.19	0.04	08/90	6.1	.59	0.4	0.05
025005		Leven	Leven Bridge	NZ	445122	196.3	C B	1959..00	744	297	447	540	00	94	89	1.85	0.13	08/76	37.8	.44	4.1	0.25
025013	*	Billingham	Thorpe Thewles	NZ	408237	61.4	VA	1969..74	584	156	428	134	72	134	72	0.30	0.03	03/73		.33	0.5	0.02
026005		Gypsey Race	Boynton	TA	137677	240.0	FV	1981–00	724	25	699	65	00		89	0.19	0.00	10/96		.93	0.5	
026004	*	Gypsey Race	Bridlington	TA	165675	253.8	C	1971..85	737	33	704	79	79		74	0.26	0.00	10/85	0.6	.87	0.8	
026007	*	Catchwater	Withernwick	TA	171403	15.5	FL	1965..79	648	210	438	401	69	79	73	0.10	0.00	08/76	1.7	.33	0.3	
026003		Foston Beck	Foston Mill	TA	093548	57.2	TP	1959..00	719	347	372	707	69	78	90	0.63	0.07	11/90	1.7	.96	1.3	0.13
026006		Elmswell Bk	Little Driffield	TA	009576	136.0	TP	1980–00	746	127	619	263	81	21	90	0.55	0.00	11/96		.98	1.4	
026009		West Beck	Snakeholme Lock	TA	066555	242.2	EM	1988–00	711	245	466	427	00	103	90	1.88	0.23	11/90		.97	4.6	0.28
026001	*	West Beck	Wansford Bridge	TA	064560	192.0	MIS	1953..74	729	410	319	688	66	156	73	2.49	0.38	02/65	5.5	.96	5.4	0.54
026002	*	Hull	Hempholme	TA	080498	378.1	MIS	1961..96	689	286	403	451	80	83	90	3.43	0.32	10/96	12.1	.85	6.7	0.49
026008		Mires Beck	North Cave	SE	890316	41.9	C	1986–00	666	154	512	253	00	60	89	0.20	0.02	06/92		.86	0.4	0.03
027050	*	Esk	Sleights	NZ	865081	308.0	B VA	1970..97	880	490	390	776	86	228	89	4.79	0.27	08/76		.39	10.1	0.60
027024	*	Swale	Richmond	NZ	146006	381.0	VA	1961..80	1211	857	354	1217	67	543	75	10.35	0.45	05/80	237.3	.36	24.2	1.26
027090		Swale	Catterick Bridge	SE	226993	499.4	US	1992–00	1189	837	352	1183	00	602	96	13.25	1.22	07/94		.40	32.2	1.50
027075		Bedale Beck	Leeming	SE	306902	160.3	FV	1983..00	713	483	250	1143	00	223	89	2.35	0.28	09/89		.41	3.9	0.32
027069		Wiske	Kirby Wiske	SE	375844	215.5	FV	1980..00	651	554	97	1472	00	136	89	3.79	0.16	08/95		.16	9.7	0.18
027008	*	Swale	Leckby Grange	SE	415748	1345.6	VA	1955..84	851	472	379	610	58	261	64	20.14	2.08	09/59	174.6	.50	41.9	3.78
027071		Swale	Crakehill	SE	425734	1363.0	C VA	1955..00	856	462	394	859	00	258	64	19.96	1.96	08/76		.47	45.2	3.37
027082		Cundall Beck	Bat Bridge	SE	419724	23.5	FV	1987..00	628	228	400	366	95	102	97	0.17	0.02	09/96		.44	0.2	0.03
027047		Snaizeholme	Low Houses	SD	833883	10.2	FV	1972..00	1800	1744	56	2310	00	1135	96	0.56	0.01	08/95		.19	1.5	0.02
027034		Ure	Kilgram Bridge	SE	190860	510.2	VA	1967–00	1371	977	394	1510	00	645	75	15.80	0.50	08/95	224.3	.33	39.1	1.13
027059		Laver	Ripon	SE	301710	87.5	C	1977..00	944	385	559	661	00	241	89	1.07	0.06	08/95	21.4	.43	2.5	0.10
027086		Skell	Alma Weir	SE	316709	119.5	FV	1984..00	911	400	511	703	00	274	96	1.52	0.10	09/91		.46	3.6	0.16

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
027007	Ure	Westwick Lock	SE 356671	914.6	B VA	1958..00	1140	733	407	**1169**	**00**	446	75	21.25	1.29	08/76	271.6	.40	50.7	2.78
027005	Nidd	Gouthwaite Res	SE 141683	113.7	MIS	1936..00	1382	731	651	**1378**	**00**	399	75	2.63	0.28	09/59		.50	7.1	0.47
027053	Nidd	Birstwith	SE 230603	217.6	VA	1975..00	1277	703	574	**1157**	**00**	**422**	**96**	4.85	0.49	08/95	154.7	.46	12.2	0.81
027051	Crimple	Burn Bridge	SE 284519	8.1	FV	1972..00	848	424	424	**732**	**00**	269	89	0.11	>0.00	08/95	4.8	.31	0.3	>0.00
027001	Nidd	Hunsingore Weir	SE 428530	484.3	B	1935..00	979	526	453	**929**	**00**	296	64	8.07	0.84	09/59	127.1	.49	18.8	1.60
027062	Nidd	Skip Bridge	SE 482561	516.0	FV	1979..00	989	520	469	**875**	**00**	**332**	**96**	8.51	1.06	08/95		.30	19.3	1.50
027009	Ouse	Skelton	SE 568554	3315.0	US	1969..00	914	473	441	**774**	**00**	284	75	49.76	4.36	08/95	356.8	.46	125.0	7.35
027083	Foss	Huntington	SE 612543	118.0	EM	1987–00	638	205	433	**361**	**00**	89	89	0.77	0.05	08/91		.44	1.9	0.06
027032	Hebden Beck	Hebden	SE 025643	22.2	MIS	1966..00	1462	250	1212	**373**	**00**	172	73	0.18	0.01	08/83	3.6	.44	0.4	0.03
027063	Dibb	Grimwith Res	SE 058639	25.5	FV	1980..00	1434	975	459	**1515**	**00**	**371**	**96**	0.79	0.00	10/84		.36	1.5	0.01
027043	Wharfe	Addingham	SE 092494	427.0	C VA	1973..00	1419	1044	375	**1491**	**00**	**663**	**96**	14.13	1.14	08/76	262.6	.33	35.4	1.63
027027 *	Wharfe	Ilkley	SE 112481	443.0	VA	1961..75	1330	980	350	1326	67	702	64	13.77	1.85	06/75	266.2	.37	33.0	2.12
027011 *	Washburn	Lindley Wood	SE 219488	87.3	MIS	1953–76	1006	209	797	430	60	71	75	0.58	0.05	01/76		.38	1.0	0.16
027002	Wharfe	Flint Mill Weir	SE 422473	758.9	B VA	1955–00	1162	716	446	**1094**	**00**	**433**	**96**	17.24	0.99	08/76	230.6	.39	41.1	2.35
027089	Wharfe	Tadcaster	SE 477441	818.0	US	1991–00	1181	676	505	1099	00	411	96	17.54	1.78	08/95		.41	43.2	2.28
027055	Rye	Broadway Foot	SE 560883	131.7	C	1974..00	913	529	384	**861**	**00**	254	89	2.21	0.42	09/89	59.9	.59	3.9	0.49
027049	Rye	Ness	SE 694792	238.7	FV	1974–00	872	461	411	**749**	**00**	217	89	3.49	0.57	09/90	48.8	.67	6.8	0.73
027058	Riccal	Crook Ho Farm	SE 661810	57.6	FV	1974..00	848	240	608	**358**	**00**	137	89	0.44	**0.16**	**10/96**	11.3	.67	0.8	0.18
027010 *	Hodge Beck	Bransdale Weir	SE 627944	18.9	TP	1936..79	*1001*	586	415	844	60	259	64	0.35	0.04	09/59	9.4	.50	0.7	0.06
027054	Hodge Beck	Cherry Farm	SE 652902	37.1	FV	1974..00	962	553	409	**779**	**00**	298	89	0.65	0.10	08/95	12.4	.54	1.3	0.13
027042	Dove	Kirkby Mills	SE 705855	59.2	FV	1972–00	926	579	347	**947**	**00**	307	89	1.09	0.15	08/95	29.3	.58	2.1	0.21
027014 *	Rye	Little Habton	SE 743771	679.0	VA	1958..71	805	429	376	624	60	206	64	9.23	1.41	09/59	85.1	.63	19.1	1.74
027057	Seven	Normanby	SE 737821	121.6	C	1974..00	910	488	422	**706**	**99**	182	89	1.88	0.08	08/76		.36	3.3	0.17
027056	Pickering Bk	Ings Bridge	SE 791819	68.6	C	1974..00	860	395	465	**659**	**00**	177	89	0.86	0.16	08/76		.65	1.5	0.20
027038	Costa Beck	Gatehouses	SE 774836	7.8	C	1970..00	708				79	1524	90	0.58	0.30	09/90	1.2	.96	0.8	0.37
027048	Derwent	West Ayton	SE 990853	127.0	TP	1972..00	870	97	773	**245**	**98**	43	89	0.39	0.00	09/91	1.3	.71	0.9	0.04
027073	Brompton Bk	Snainton Ings	SE 936794	12.9	C	1981..00	740	599	141	**951**	**00**	149	89	0.25	>0.00	10/90		.92	0.5	0.03
027087	Derwent	Low Marishes	SE 833774	457.5	EM	1989–00	735	241	494	**412**	**00**	149	90	3.50	0.67	08/89		.80	7.1	0.91
027041	Derwent	Buttercrambe	SE 731587	1586.0	C	1973–00	779	322	457	**522**	**00**	157	89	16.21	3.08	09/90	82.0	.68	33.6	3.90
027015 *	Derwent	Stamford Bridge	SE 714557	1634.3	VA	1961..75	729	316	413	454	66	188	64	16.39	3.79	09/64	81.6	.70	32.0	5.25
027044	Blackfoss Bk	Sandhills Bridge	SE 725475	47.0	FV	1974..00	664	270	394	**611**	**00**	91	89	0.40	0.01	08/76		.44	0.8	0.04
027076	Bielby Beck	Thornton Lock	SE 760444	103.1	FV	1983–00	695	123	572	**240**	**00**	42	89	0.40	0.01	08/90		.61	0.9	0.03
027035	Aire	Kildwick Bridge	SE 013457	282.3	VA	1968..00	1164	706	458	**1206**	**00**	408	71	6.32	0.29	08/76	60.9	.37	15.9	0.58
027084	Eastburn Beck	Crosshills	SE 021452	43.3	FV	1988–00	1107	643	464	**1013**	**00**	**432**	**96**	0.88	0.04	08/95		.35	2.2	0.06
027072	Worth	Keighley	SE 063408	71.7	FV	1980..00	1254	596	658	**830**	**00**	**372**	**96**	1.35	0.22	10/95		.51	3.1	0.26
027077	Bradford Bk	Shipley	SE 151375	58.0	FV	1983–00	945	351	594	469	86	**254**	**97**	0.65	0.15	08/95		.51	1.4	0.16
027028	Aire	Armley	SE 281340	691.5	B VA	1961..00	1069	688	381	**1002**	**00**	432	71	15.09	2.28	08/76	138.7	.49	34.1	3.33
027080	Aire	Lemonroyd	SE 381282	865.0	C	1985–00	988	657	331	**962**	**00**	**483**	**96**	18.01	4.26	08/95		.55	39.7	4.96
027081	Oulton Beck	Farrer Lane	SE 365281	25.1	FV	1986–00	660	181	479	**320**	**00**	106	89	0.14	0.02	08/95		.53	0.3	0.02
027012 *	Hebden Wtr	High Greenwood	SD 973309	36.0	TP	1954–73	1402	611	791	910	66	315	71	0.70	0.22	09/55	12.3	.44	1.7	0.23
027018 *	Ryburn	Ryburn Res	SE 025187	10.7	TP	1956–74	1336	463	873	781	58	121	73	0.16	0.00	06/73		.33	0.3	
027019 *	Booth Dean	Booth Wd Mill	SE 033166	15.9	CC	1956..74	1386	446	940	744	66	238	73	0.22	0.08	10/59		.30	0.4	0.04
027068	Ryburn	Ripponden	SE 035189	33.0	FV	1981..00	1414	572	842	**944**	**00**	**282**	**96**	0.60	0.12	08/84		.53	1.2	0.17
027029	Calder	Elland	SE 124219	341.9	C VA	1961..00	1290	787	503	1208	81	**494**	**96**	8.53	1.66	09/89	140.8	.50	18.7	2.08
027061	Colne	Longroyd Bridge	SE 136161	72.3	FV	1978–00	1359	626	733	**878**	**00**	**360**	**96**	1.44	0.27	09/89	31.7	.41	3.2	0.29
027039 *	Holme	Digley Reservoir	SE 112069	9.1	VN	1967–73	1444	301	1143	367	68	267	71	0.09	0.06	11/69		.38	0.1	0.03
027065	Holme	Queens Mill	SE 142157	97.4	FV	1979..00	1290	705	585	**1033**	**00**	**442**	**96**	2.18	0.39	09/89		.50	4.8	0.45
027031	Colne	Colne Bridge	SE 174199	245.0	C VA	1964..00	1168	567	601	859	66	**318**	**96**	4.41	0.37	08/76	117.3	.39	9.9	0.57
027074	Spen Beck	Northorpe	SE 225210	46.3	C	1982–00	808	522	286	653	94	**340**	**99**	0.77	**0.13**	**07/99**		.58	1.5	0.25
027004 *	Calder	Newlands	SE 365220	899.0	VA	1960..76	1053	625	428	883	66	399	75	17.81	4.51	10/72	209.6	.52	36.2	4.89
027079	Calder	Methley	SE 408257	930.0	US	1988–00	1045	692	353	**1013**	**00**	**488**	**96**	20.41	5.51	08/95		.57	43.5	5.83
027003	Aire	Beal Weir	SE 535255	1932.1	B VA	1958..00	987	584	403	832	66	347	75	35.76	5.05	08/76		.52	76.9	8.89
027040	Doe Lea	Staveley	SK 443746	67.9	FL	1970–00	715	269	446	404	79	141	76	0.58	0.05	08/76	10.1	.52	1.2	0.13
027052	Whitting	Sheepbridge	SK 376747	50.2	C	1976..00	847	511	336	**707**	**00**	**332**	**96**	0.81	0.12	08/76	15.7	.49	1.9	0.17
027026	Rother	Whittington	SK 394744	165.0	VA	1963..00	812	371	441	528	81	189	75	1.94	0.20	08/76	41.5	.47	4.3	0.31
027025	Rother	Woodhouse Mill	SK 432857	352.2	VA	1961..00	771	374	397	570	66	227	64	4.17	0.69	10/72	50.3	.52	8.9	0.97
027020 *	Scout Dike St	Scout Dike Res	SE 236047	15.2	VN	1956..80	1038	230	808	421	80	56	76	0.11	>0.00	11/78		.11	0.2	
027016 *	Little Don	Underbank Res	SK 253992	38.6	MIS	1956..80	1177	523	654	794	80	120	76	0.64	0.12	12/75		.41	1.5	0.14
027013 *	Ewden Beck	More Hall Res	SK 289957	26.4	MIS	1954..80	1159	352	807	564	60	91	76	0.29	0.06	01/76		.38	0.6	0.05
027017 *	Loxley	Damflask Res	SK 286906	43.5	MIS	1956..80	1145	410	735	623	66	115	76	0.56	0.09	12/59		.34	0.9	0.11
027067	Sheaf	Highfield Road	SK 357863	49.1	FV	1981–00	910	394	516	**570**	**00**	277	85	0.61	0.07	08/95		.45	1.4	0.08
027006	Don	Hadfields Weir	SK 390910	373.0	B VA	1965–00	1030	456	574	**682**	**00**	246	76	5.39	**0.88**	**09/96**	85.1	.50	11.2	1.43
027066	Blackburn B	Ashlowes	SK 393914	42.8	FV	1981–00	777	217	560	**365**	**00**	119	85	0.29	0.01	09/85		.35	0.7	0.02
027022 *	Don	Rotherham Weir	SK 427928	826.0	VA	1960..71	869	465	404	607	66	298	64	12.18	3.15	09/64	121.5	.52	24.1	3.27
027023	Dearne	Barnsley Weir	SE 350073	118.9	CB	1960..00	788	374	414	**573**	**00**	197	75	1.41	0.13	09/90	28.9	.48	3.0	0.24
027030	Dearne	Adwick	SE 477020	310.8	C VA	1963..00	715	344	371	534	69	212	76	3.39	0.70	08/76	38.7	.57	7.0	0.94
027021	Don	Doncaster	SE 570040	1256.2	VA	1959..00	812	409	403	**612**	**00**	223	75	16.29	3.80	09/59	153.5	.55	35.0	4.92
027064	Went	Walden Stubbs	SE 551163	83.7	FV	1979..00	627	209	418	**340**	**00**	**100**	**97**	0.56	**0.13**	**09/96**		.59	1.0	0.16
027070	Eller Beck	Skipton	SD 984502	35.3	CC	1981..00	1081				**00**	631	89	1.73	0.05	08/95		.17	1.9	0.09
027085	Cod Beck	Dalton Bridge	SE 422766	209.3	EM	1989..00	697	219	478	**404**	**00**	**138**	**97**	1.46	0.13	09/91		.48	3.6	0.16
027088	Calder	Caldene Bridge	SE 012260	171.7	US	1996–00	1446	755	691	1066	00	473	96	4.11	0.88	08/97		42	9.4	0.74

Hydrometric Statistics

	Period	Rainfall (mm)	% of pre-1998	Runoff (mm)	% of pre-1998	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
021032 Glen at Kirknewton C.A: 198.9 km^2	**66..95**	**859**		**445**		**2.81**	**141.3**	**02/10 1981**	**0.12**	**23/07 1994**	**6.1**	**1.54**	**0.34**
M.A: EA Local No: Sens.: 26.2 B/full: 145.0m^3s^{-1}													
F.A.R: N Level: 54m UE: <.01 FAI: 0.987													
Comment: Velocity-area station with informal Flat V profile control (about 1:100 cross-slope, insensitive). Logger installed in 1991 (very limited data 1983-90 but charts available). Flows from 1989 reprocessed in 2002: low flows increased, some peak flows decreased; 1994 minima under review. Natural flow regime, no abstractions. # Upland catchment, draining from The Cheviot, developed mostly on igneous formations.	1996	798	93	419	94	2.64	29.5	01/05	0.16	25/09	6.2	1.70	0.19
	1997	854	99										
	1998	1223	142	717	161	4.52	75.9	03/11	0.84	05/03	8.9	3.01	1.02
	1999	921	107	434	98	2.74	22.9	24/01	0.25	03/08	6.1	1.83	0.34
	2000	1161	135	644	145	4.05	92.7	06/11	0.50	27/07	8.0	2.65	0.62
022009 Coquet at Rothbury C.A: 346.0 km^2	**72..95**	**893**		**506**		**5.55**	**265.9**	**01/04 1992**	**0.44**	**04/08 1990**	**11.7**	**3.25**	**0.78**
M.A: EA Local No: Sens.: 10.6													
F.A.R: N Level: 71m UE: FAI:													
Comment: Velocity-area station with cableway; informal mill weir below station provides good control. Well confined section with straight approach. Calibration under review - a reduction in computed high flows is anticipated. # Natural catchment located on Cheviot Igneous, Cementstone and Fell S'st.	1996	809	91	443	88	4.84	140.1	01/05	0.65	24/09	10.3	3.09	0.70
	1997	851	95	446	88	4.89	100.0	19/02	0.81	05/10	11.1	2.34	0.93
	1998	1179	132	737	146	8.08	207.6	02/11	1.66	19/08	16.2	4.97	1.95
	1999	972	109	539	107	5.91	93.9	25/01	0.77	03/08	12.4	3.74	0.98
	2000	1179	132	726	143	7.94	209.6	06/11	1.18	23/07	14.0	4.98	1.51
022001 Coquet at Morwick C.A: 569.8 km^2	**63..95**	**863**		**465**		**8.40**	**365.8**	**01/04 1992**	**0.69**	**18/08 1995**	**18.3**	**4.69**	**1.18**
M.A: EA Local No: Sens.: 6.6 B/full: 175.0m^3s^{-1}													
F.A.R: N Level: 5m UE: <.01 FAI: 0.985													
Comment: VA station with 34m wide concrete informal Flat V weir (approx. 1:20 cross-slope) made with pre-cast segments (installed 1973). Cableway. Fairly straight section with high banks. Replaced earlier station at Guyzance. Dmf flow repetitions (realistic) prior to 1967. Responsive natural regime except for annual flush and drain of dam u/s of gauge on Duke of Northumberland estate. # Predominantly upland catchment draining from Cheviots with some afforestation. Largely Carboniferous Limestone and Devonian Igneous series.	1996	741	86	372	80	6.71	170.2	01/05	0.91	21/09	13.7	4.09	0.99
	1997	804	93	378	81	6.82	114.4	28/06	0.88	25/04	15.4	3.05	1.21
	1998	1113	129	664	143	12.00	216.7	03/11	2.04	19/08	27.0	6.58	2.55
	1999	903	105	458	98	8.27	102.1	05/01	1.02	03/08	18.3	4.96	1.20
	2000	1098	127	659	142	11.88	309.1	06/11	1.89	05/07	23.9	6.81	2.24
022007 Wansbeck at Mitford C.A: 287.3 km^2	**68..95**	**793**		**347**		**3.16**	**237.0**	**03/01 1982**	**0.10**	**20/08 1976**	**6.9**	**1.30**	**0.21**
M.A: EA Local No: Sens.: 7.6 S/full: 35.0m^3s^{-1}													
F.A.R: S Level: 31m UE: <.01 FAI: 0.977													
Comment: Velocity-area station with Flat V weir and central flume for low flow measurement (installed 1974). Replaced older broad-crested weir also with central flume. Recalibration of high flow rating produced substantial reduction in flood flows. Modest net effect of artificial influences (export from headwater reservoir); Mitford abstraction closed by mid-1990s. # A mainly lowland catchment located on Millstone Grit, Upper, Middle and Lower L'st.	1996	655	83	260	75	2.36	103.2	01/05	0.18	05/08	5.5	1.04	0.21
	1997	749	94	267	77	2.43	84.1	30/06	0.29	04/10	5.4	0.96	0.33
	1998	996	126	516	149	4.70	178.5	02/11	0.43	19/08	11.6	2.38	0.59
	1999	812	102	328	95	2.99	59.9	07/03	0.22	16/08	6.9	1.34	0.25
	2000	1039	131	558	161	5.07	194.4	06/11	0.35	18/08	9.9	2.59	0.43
022006 Blyth at Hartford Bridge C.A: 269.4 km^2	**66..95**	**698**		**241**		**2.06**	**139.2**	**01/04 1992**	**0.05**	**23/08 1976**	**4.8**	**0.73**	**0.11**
M.A: EA Local No: Sens.: 23.8 B/full: 190.0m^3s^{-1}													
F.A.R: PE Level: 25m UE: .01 FAI: 0.989													
Comment: Velocity-area station with Flat V weir for low flow control installed in 1968. Originalty 24.4m wide, reduced in width in early 1980s and recalibrated. Small net export - runoff from about 20 sq.km of headwaters diverted to Whittle Dean catchment(but a compensation flow has been maintained into the Pont since 1996). # Mostly Millstone Grit and Coal Measures.	1996	604	87	160	66	1.36	49.7	12/02	0.10	19/08	3.2	0.62	0.13
	1997	670	96	178	74	1.52	34.2	01/07	0.15	05/10	3.9	0.48	0.18
	1998	880	126	380	158	3.25	72.9	03/11	0.28	31/08	7.7	1.67	0.38
	1999	726	104	240	100	2.05	26.3	18/08	0.12	12/08	4.9	1.06	0.15
	2000	960	138	451	187	3.84	**153.3**	**06/11**	0.21	12/08	8.9	1.72	0.25
023011 Kielder Burn at Kielder C.A: 58.8 km^2	**70..95**	**1269**		**1012**		**1.89**	**106.7**	**03/11 1984**	**0.12**	**05/07 1970**	**4.4**	**0.93**	**0.28**
M.A: EA Local No: Sens.: 19.3 B/full: 46.0m^3s^{-1}													
F.A.R: N Level: 214m UE: <.01 FAI: 1.000													
Comment: Flat V weir 12m broad (1:2 u/s and d/s slopes; 1:20 cross-slope) with low wing walls (0.61m). Cableway u/s (straight reach) - rating based on gaugings; possible overestimation of high flows; overspill of banks in very high flows. # The catchment embraces Kielderhead Moor and - at lower levels - Kielder Forest. Geology comprises mainly Carboniferous formations cut by numerous faults and dykes; thick covering of Boulder Clay in the valley, peat on the hills.	1996	1096	86	890	88	1.65	39.6	05/11	0.23	20/09	3.9	0.89	0.25
	1997	1141	90	960	95	1.79	79.1	17/02	0.32	20/08	4.3	0.77	0.36
	1998	1404	111	1261	125	2.35	62.1	24/10	0.44	25/05	5.4	1.36	0.49
	1999	1378	109	1181	117	2.20	66.3	24/01	0.31	03/08	5.5	1.10	0.38
	2000	1536	121	1330	131	2.47	55.9	09/07	0.32	23/07	5.5	1.35	0.38
023022 North Tyne at Uglydub C.A: 241.5 km^2	**82..95**	**1351**		**1010**		**7.74**	**87.4**	**11/12 1994**	**0.33**	**29/02 1984**	**16.1**	**5.81**	**1.47**
M.A: EA Local No: Sens.:													
F.A.R: SR Level: 135m UE: FAI:													
Comment: Flat V weir. Owned by North East Water, operated by EA. Measures compensation flow, prescribed flows, abstractions and overspill from Kielder Res.; also releases to support hydropower - max. release of 15.4 m^3s^{-1} gives pulsed hydrograph but sub-daily pulses to 1992 concealed in dmfs. # Geology: predominantly shales and s'sts of the Lower Carboniferous series. Extensively afforested with moorland headwaters.	1996	1115	83	800	79	6.11	29.9	01/11	1.41	13/12	11.5	3.21	1.46
	1997	1222	90	842	83	6.45	85.9	19/02	1.45	05/02	14.1	2.70	
	1998	1492	110	1165	115	8.92	41.2	09/01	1.46	28/12	15.9	10.43	1.64
	1999	1423	105	1038	103	7.95	42.6	24/12	1.58	27/11	16.0	5.69	2.13
	2000	1564	116	1274	126	9.73	41.4	12/12	1.52	26/06	17.0	10.08	1.80
023008 Rede at Rede Bridge C.A: 343.8 km^2	**68..95**	**946**		**533**		**5.81**	**266.8**	**03/01 1982**	**0.38**	**26/08 1976**	**13.9**	**2.52**	**0.60**
M.A: EA Local No: Sens.: 13.8 B/full: 65.0m^3s^{-1}													
F.A.R: S Level: 107m UE: <.01 FAI: 0.978													
Comment: Flat V weir constructed with pre-fabricated crest units. Width 24.3m. Catcleugh Res. (commands 40 sq.km) has an appreciable influence on flows; modest net export. # Lower Carboniferous rocks mostly covered by Boulder Clay and alluvium. Forestry and grazing.	1996	824	87	424	80	4.61	137.0	01/05	0.48	18/08	10.8	2.28	0.52
	1997	887	94	445	83	4.86	132.1	19/02	0.60	02/10	11.6	1.91	0.70
	1998	1168	123	711	133	7.75	178.7	02/11	0.97	11/07	17.9	3.96	1.11
	1999	1023	108	562	105	6.13	142.3	05/01	0.56	03/08	14.4	2.63	0.64
	2000	1216	129	767	144	8.34	164.8	06/11	0.69	23/07	18.8	4.74	0.92
023003 North Tyne at Reaverhill C.A: 1007.5 km^2	**59..95**	**1063**		**649**		**20.74**	**738.0**	**30/08 1975**	**0.96**	**25/08 1976**	**48.0**	**11.16**	**2.42**
M.A: EA Local No: Sens.: 7.2 B/full: 560.0m^3s^{-1}													
F.A.R: S Level: 65m UE: <.01 FAI: 0.936													
Comment: Velocity-area station with natural channel control. Replaced earlier station at Barrasford. Predominantly natural regime but affected by Kielder releases (see 23023) - including pulsed hydropower releases; overall impact most evident at low flows. Catcleugh and Colt Crag Reservoirs in catchment (also intermittent abstraction at Barrasford) - net export of water. # Upland catchment developed mainly on formations of the Carboniferous L'st Series. Rugged moorland and upland pasture, some afforestation.	1996	878	83	527	81	16.79	245.8	01/05	2.72	18/06	32.6	12.37	3.68
	1997	978	92	562	87	17.97	337.6	19/02	2.83	28/09	35.0	11.83	3.11
	1998	1249	117	852	131	27.21	333.2	02/11	4.80	26/05	51.5	20.21	6.69
	1999	1126	106	721	111	23.02	361.4	05/01	3.38	15/09	47.3	16.33	4.51
	2000	1310	123	908	140	28.93	277.4	06/11	2.71	20/07	56.9	22.46	5.10
023006 South Tyne at Featherstone C.A: 321.9 km^2	**66..95**	**1374**		**1037**		**10.59**	**384.3**	**31/01 1995**	**0.71**	**26/08 1976**	**25.3**	**5.37**	**1.35**
M.A: EA Local No: Sens.: 12.1 S/full: 500.0m^3s^{-1}													
F.A.R: N Level: 132m UE: <.01 FAI: 0.995													
Comment: Compound Crump profile weir. Lower crest 15.2m, upper crest 29.5m. Theoretical rating. Structure contains all flows. Extreme peaks may be underestimated. Natural flow regime. # Linear, north trending catchment in northern Pennines. Geology: mainly Carboniferous Limestone.	1996	1004	73	705	68	7.17	177.5	05/11	0.86	24/09	16.6	3.89	0.99
	1997	1243	90	909	88	9.28	241.9	19/02	1.47	20/08	21.4	4.45	1.69
	1998	1531	111	1203	116	12.28	256.7	26/10	1.93	25/05	27.6	7.35	2.36
	1999	1483	108										
	2000	1652	120	1328	128	13.52	343.3	11/01	1.20	27/07	35.8	6.88	1.54
023004 South Tyne at Haydon Bridge C.A: 751.1 km^2	**62..95**	**1181**		**769**		**18.31**	**760.9**	**31/01 1995**	**1.262**	**23/08 1995**	**42.9**	**9.57**	**2.07**
M.A: EA Local No: Sens.: 7.9 B/full: 500.0m^3s^{-1}													
F.A.R: N Level: 59m UE: <.01 FAI: 0.989													
Comment: Velocity-area station with informal Flat V weir as low flow control installed in 1972 - earlier low flows of limited accuracy; 1968 and 1969 minima estimated at 2 m^3s^{-1}. Cableway. Some overspill onto lb during floods. Recalibration underway - expected to increase flows. Responsive natural regime. # Upland catchment draining Northern Pennines. Geology: predominantly Carboniferous (Carb. L'st and Millstone Grit).	1996	884	75	490	64	11.64	269.6	05/11	1.08	25/09	27.2	6.21	1.28
	1997	1062	92	638	83	15.20	508.1	19/02	2.08	30/10	38.2	6.81	2.30
	1998	1341	114	902	117	21.48	446.1	24/10	2.74	26/05	45.8	13.65	3.84
	1999	1261	107	845	110	20.13	475.7	02/12	1.75	04/08	45.3	10.69	2.58
	2000	1447	123	1076	140	25.55	573.0	11/01	2.63	08/08	61.8	13.88	3.25

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
023001 **Tyne at Bywell** C.A: 2175.6 km^2	**56..95**	**1039**		**643**		**44.38**	**1586.0**	**17/10**	**2.48**	**07/09**	**102.2**	**24.44**	**5.84**
M.A: EA Local No: Sens.: 11.8								**1967**		**1976**			
F.A.R: S Level: 14m UE: <.01 FAI: 0.961													
Comment: Velocity-area station. Principal gauging station on the Tyne. In drought years, Kielder releases maintain low flows (4.2 m^3s^{-1} min.) and support transfers to the Derwent, Wear and Tees. Riding Mill abstraction point is 500m u/s. Blockage/damage to stilling pipe caused problems in early 1990s. Dmf flow repetitions (realistic) prior to 1967. Some export of water, and regime influenced by pulsed hydropower releases from Kielder, but limited impact on annual runoff. # An impervious catchment (largely Carboniferous Limestone) draining from north Pennines. Extensive moorland, significant afforestation; arable farming confined to the lower valley.	1996	829	80	481	75	33.10	425.1	12/02	5.17	15/09	69.3	21.37	5.64
	1997	961	92	582	91	40.16	865.5	19/02	5.45	28/09	86.8	22.33	7.15
	1998	1216	117	876	136	60.42	817.0	24/10	9.96	26/05	123.1	40.90	15.13
	1999	1107	107	747	116	51.53	846.0	05/01	7.27	04/08	111.4	30.08	9.09
	2000	1299	125	974	151	66.99	978.9	06/11	7.09	21/07	147.9	44.26	11.40
023002 **Derwent at Eddys Bridge** C.A: 118.0 km^2	**54..95**	**953**		**295**		**1.10**	**58.0**	**15/07**	**0.08**	**15/10**	**2.2**	**0.48**	**0.27**
M.A: EA Local No: Sens.: 7.3 S/full: 126.0 m^3s^{-1}								**1961**		**1989**			
F.A.R: SP Level: 181m UE: <.01 FAI: 0.835													
Comment: Broad-crested weir with central low flow flume. Model calibration. From 1965 flows controlled by Derwent Reservoir 2km u/s, stark contrast with previous natural regime. Substantial net export of water. # Geology: mixture of Carboniferous Limestone and Millstone Grit partially overlain by Boulder Clay and morainic drift. Upland, morainic catchment used for rough grazing.	1996	832	87	137	46	0.51	4.6	15/02	0.40	19/07	0.6	0.47	0.43
	1997	922	97	141	48	0.53	8.9	20/02	0.39	03/04	0.6	0.45	0.40
	1998	1092	115	154	52	0.58	8.8	03/11	0.36	19/09	0.8	0.50	0.41
	1999	998	105	160	54	0.60	7.4	09/12	0.40	06/08	0.8	0.46	0.41
	2000	1306	137	405	137	1.51	**93.4**	**06/11**	0.18	15/08	3.2	0.47	0.38
023007 **Derwent at Rowlands Gill** C.A: 242.1 km^2	**62..95**	**843**		**332**		**2.55**	**98.0**	**05/11**	**0.28**	**18/04**	**5.2**	**1.53**	**0.81**
M.A: EA Local No: Sens.: 11.9								**1967**		**1972**			
F.A.R: P Level: 29m UE: .02 FAI: 0.910													
Comment: Two Crump profile weirs with slightly different crest levels beneath the two arches of a bridge. Flow regime substantially influenced by Derwent Reservoir (started impounding in 1965); significant net export. # Carboniferous L'st (upper catchment), Millstone Grit and Coal Measures.	1996	739	88	234	70	1.79	30.3	12/02	0.79	19/08	3.1	1.33	0.83
	1997	826	98	239	72	1.83	41.6	30/06	0.75	02/10	3.0	1.19	0.81
	1998	1012	120	332	100	2.55	44.7	02/04	0.89	21/09	5.1	1.71	0.94
	1999	872	103	265	80	2.04	24.1	09/12	0.90	01/08	3.8	1.41	0.94
	2000	1178	140	585	176	4.48	**136.4**	**06/11**	0.89	15/08	9.5	1.92	1.09
023018 **Ouse Burn at Woolsington** C.A: 9.0 km^2	92-95	662		196		0.06	2.8	01/04	0.00	02/08	0.1	0.02	>0.00
M.A: EA Local No: Sens.:								1992		1994			
F.A.R: N Level: 63m UE: FAI:													
Comment: Informal Flat V weir (3m broad). Structure drowns at moderate flows. Ultrasonic installed in 2001 to calibrate high flows. Floods rarely overtop wingwalls. # Relatively low-lying catchment. Agricultural headwaters, substantially urbanised below.	1996	566	85	157	80	0.04	2.6	12/02	>0.00	18/08	0.1	>0.00	>0.00
	1997	620	94										
	1998	839	127	322	164	0.09	2.2	02/11	0.01	09/08	0.2	0.05	0.01
	1999	684	103	200	102	0.06	1.6	03/03	>0.00	10/08	0.1	0.03	0.01
	2000	931	141										
023016 **Ouse Burn at Crag Hall** C.A: 55.0 km^2	89..95	595		142		0.25	16.1	01/04	>0.00	10/08	0.6	0.10	0.02
M.A: EA Local No: Sens.:								1992		1990			
F.A.R: E Level: 36m UE: FAI:													
Comment: Rectangular thin-plate weir with broad-crested flanks. Theoretical rating. Peak flow of 18.6 recorded on 28/2/79. # Agricultural headwaters but a largely urban (around 40%) catchment developed on Carboniferous formations (Coal Measures).	1996	579	97	150	106	0.26	11.8	12/02	0.03	19/08	0.5	0.14	0.03
	1997	632	106	*145*	102	0.25					0.5	0.12	0.04
	1998	839	141	254	179	0.44	9.8	02/04	0.04	15/08	1.1	0.19	0.06
	1999	690	116	162	114	0.28	10.4	18/08	0.02	16/08	0.6	0.13	0.03
	2000	906	152	296	208	0.51	17.0	06/11	0.04	24/08	1.1	0.19	0.05
023017 **Team at Team Valley** C.A: 61.9 km^2	91..95	670		426		0.84	23.1	14/05	0.19	09/11	1.2	0.69	0.45
M.A: EA Local No: Sens.:								1993		1991			
F.A.R: Level: 9m UE: FAI:													
Comment: Velocity-area station in culverted section below road bridge, low flow control exercised by pre-existing weir. Temporary ultrasonic installation providing full calibration. Flows for period of record reprocessed in 2002. Sewage effluent and pumped minewaters affect the very responsive regime. # A primarily rural catchment on the SW edge of Newcastle.	1996	580	87	409	96	0.80	11.5	12/02	0.35	03/08	1.0	0.72	0.49
	1997	668	100	438	103	0.86	13.7	30/06	0.45	15/05	1.2	0.70	0.52
	1998	859	128	607	142	1.19	12.7	02/11	0.44	23/05	2.1	0.92	0.64
	1999	681	102	460	108	0.90	10.1	04/03	0.38	01/08	1.3	0.78	0.56
	2000	915	137	593	139	1.16	23.2	03/06	0.49	04/02	1.9	0.75	0.53
024003 **Wear at Stanhope** C.A: 171.9 km^2	**58..95**	**1295**		**670**		**3.65**	**297.0**	**31/01**	**0.23**	**06/09**	**8.5**	**1.70**	**0.48**
M.A: EA Local No: Sens.: 14.6 S/full: 180.0 m^3s^{-1}								**1995**		**1959**			
F.A.R: SE Level: 202m UE: <.01 FAI: 0.979													
Comment: Compound Crump profile weir overall width 19.1m central low crest width 7.6m. Steep rocky section. Wing walls raised in 1967; no bypassing. Very flashy response. Burnhope Res. (catchment area: 19 sq.km) has noticeable effect; net export. # Steep Pennine moorland catchment. Mainly Lower Carboniferous L'st. Some arable farm land but mostly sheep grazing.	1996	1060	82	507	76	2.76	63.1	05/11	0.37	14/09	6.1	1.45	0.41
	1997	1217	94	628	94	3.42	160.4	19/02	0.49	04/10	9.3	1.42	0.54
	1998	1476	114	856	128	4.67	162.6	24/10	0.81	25/09	11.3	2.48	0.85
	1999	1408	109										
	2000	1713	132	1032	154	5.61	116.1	03/06	0.57	08/08	14.2	2.83	0.62
024004 **Bedburn Beck at Bedburn** C.A: 74.9 km^2	**59..95**	**880**		**510**		**1.21**	**46.2**	**26/08**	**0.07**	**22/08**	**2.7**	**0.69**	**0.15**
M.A: EA Local No: Sens.: 13.6 S/full: 70.0 m^3s^{-1}								**1986**		**1995**			
F.A.R: N Level: 109m UE: <.01 FAI: 0.999													
Comment: Compound Crump profile weir, 2.4m low crest, 10.3m overall. Set in a deep valley; no bypassing. Natural regime. # Millstone Grit in north and Coal Measures to south. Coniferous forest, arable farming and sheep grazing.	1996	814	93	399	78	0.94	*12.9*	*19/12*	0.11	19/08	2.2	0.55	0.13
	1997	884	100	427	84	1.01	27.4	20/02	0.14	05/10	2.6	0.50	0.16
	1998	1073	122	626	123	1.49	25.4	02/04	0.19	19/08	3.4	0.92	0.24
	1999	916	104	474	93	1.13	28.6	15/01	0.14	15/09	2.8	0.60	0.16
	2000	1261	143	843	165	2.00	**125.1**	**03/06**	0.16	25/08	3.6	1.08	0.20
024008 **Wear at Witton Park** C.A: 455.0 km^2	**72..95**	**1039**		**539**		**7.78**	**283.0**	**31/01**	**0.70**	**07/09**	**17.1**	**4.06**	**1.21**
M.A: EA Local No: Sens.: 9.3 S/full: 7.0 m^3s^{-1}								**1995**		**1976**			
F.A.R: SRP Level: 77m UE: <.01 FAI: 0.958													
Comment: Velocity-area station with informal Flat V low flow control of rectangular section. Cableway. Catchment contains three reservoirs (including Burnhope), net export of water. Transfers from Kielder (Tyne catchment) in drought years - entering the Wear at Frosterley. # Geology: mainly Carboniferous L'st and Millstone Grit. Pennine headwaters with extensive moorland, mixed land use in the lower valley.	1996	904	87	416	77	5.98	89.7	16/02	0.91	15/07	14.1	3.69	1.12
	1997	1006	97	448	83	6.46	216.0	19/02	1.02	05/10	16.7	3.11	1.13
	1998	1222	118	625	116	9.02	205.9	24/10	1.42	25/09	20.8	5.22	1.63
	1999	1107	107	543	101	7.83	224.3	15/01	0.94	06/09	20.4	3.96	1.13
	2000	1421	137	801	149	11.53	251.6	03/06	1.15	17/08	26.1	6.41	1.33
024005 **Browney at Burn Hall** C.A: 178.5 km^2	**54..95**	*744*		**300**		**1.70**	**81.0**	**26/08**	**0.13**	**01/10**	**3.5**	**0.98**	**0.30**
M.A: EA Local No: Sens.: 13.7 S/full: 60.0 m^3s^{-1}								**1986**		**1989**			
F.A.R: GI Level: 44m UE: .03 FAI: 1.000													
Comment: Compound broad-crested weir (17.6m broad, low crest 5.5m) within a deep valley and having a steep fall d/s. Divide piers inserted and wing walls raised in 1968. Theoretical rating with check gaugings. Artificial influences (imports, minewater discharges) evident at low flows, although impact on annual runoff is limited. Engineering works 28/10 - 21/11/88: dmfs removed from NRFA. # Geology: Coal Measures.	1996	637	86	229	76	1.29	37.2	12/02	0.20	02/10	2.9	0.80	0.23
	1997	714	96	227	76	1.29	30.5	28/06	0.24	05/10	2.9	0.63	0.27
	1998	945	127	412	137	2.33	40.6	03/04	0.27	23/09	5.3	1.34	0.36
	1999	744	100	251	84	1.42	27.3	07/03	0.20	04/08	2.9	0.81	0.22
	2000	1026	138	470	157	2.65	75.8	03/06	0.21	30/08	5.6	1.09	0.31
024001 **Wear at Sunderland Bridge** C.A: 657.8 km^2	**57..95**	**943**		**535**		**11.15**	**366.8**	**05/11**	**0.90**	**04/10**	**25.4**	**5.89**	**1.96**
M.A: EA Local No: Sens.: 8.4								**1967**		**1959**			
F.A.R: SRGE Level: 40m UE: .01 FAI: 0.962													
Comment: Compound broad-crested weir within the arches of road bridge. High flows are above vertical walls of bridge openings and tapping point within drawdown effect. Weed growth in summer. Flows reprocessed - using a single rating - in 2001. Significant artificial influences: reservoirs in catchment, minewater discharges and, in drought years, minimum flows supported by Kielder transfer. # Geology: mainly Carboniferous (Carb. L'st, Millstone Grit and Coal Measures).	1996	817	87	430	80	8.95	128.6	12/02	1.72	26/07	21.4	5.39	1.92
	1997	908	96										
	1998	1108	117	684	128	14.27	249.0	24/10	2.58	24/09	33.8	8.19	2.86
	1999	974	103	553	103	11.53	214.9	15/01	1.72	15/09	27.4	5.90	1.98
	2000	1253	133	824	154	17.14	375.8	04/06	1.77	12/08	37.8	8.86	2.08

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
024009	**Wear at Chester le Street** C.A: 1008.3 km^2	**77..95**	**874**		**453**		**14.47**	**354.4**	**26/08 1986**	**2.29**	**16/07 1984**	**31.9**	**7.71**	**3.03**
M.A: EA	Local No: Sens.: 8.3													
F.A.R: RG	Level: 6m UE: .02 FAI: 0.974													
Comment: Flat V weir (1:2, 1:2 profile). Structure drowns but calibrated by c/m at high flows. Reservoirs in catchment include Burnhope. In drought years low flows supported by Kielder transfer (flows maintained >2 m^3s^{-1}). Overall impact of artificial influences is modest. # Geology: Carboniferous Limestone and Millstone Grit. Pennine headwaters with extensive moorland, mixed land use in lower valley.		1996	740	85	343	76	10.93	189.5	12/02	2.59	17/07	23.5	6.93	2.88
		1997	833	95	377	83	12.05	241.8	19/02	2.85	03/10	27.5	6.17	3.08
		1998	1040	119	572	126	18.29	280.1	24/10	3.52	24/09	42.1	10.34	4.33
		1999	884	101	450	99	14.39	244.9	15/01	2.76	16/09	35.5	7.85	3.17
		2000	1156	132	695	153	22.17	368.1	07/11	3.23	17/08	42.6	11.17	3.66
025003	**Trout Beck at Moor House** C.A: 11.4 km^2	**57..95**	**1915**		**1521**		**0.55**	**45.5**	**25/03 1979**	**0.01**	**03/06 1959**	**1.5**	**0.19**	**0.03**
M.A: EA	Local No: 3509 Sens.: 25.0 S/full: 41.3m^3s^{-1}													
F.A.R: N	Level: 533m UE: <.01 FAI: 1.000													
Comment: Compound Crump weir 12.8m broad (low crest 1.5m). Large capacity structure (originally >70 m^3s^{-1}). U/s shoaling and low winter temperatures affected precision of flows. Discontinued in 1980 but recommissioned in 1991 as part of a global environmental research initiative. Responsive natural regime. flows from 1991 subject to reprocessing based on a revised rating. # Small, relatively remote, catchment located in a nature reserve in upper Teesdale. Peaty moorland developed mainly on Carboniferous L'st.		1996	1285	67	1131	74	0.41	11.4	15/02	0.01	27/06	1.3	0.11	0.01
		1997	1441	75	1298	85	0.47	15.2	19/02	0.01	01/06	1.4	0.15	0.02
		1998	1921	100	1809	119	0.65	21.2	10/09	0.02	24/05	1.7	0.31	0.04
		1999	1949	102	1631	107	0.59	16.1	15/01	0.02	03/08	1.7	0.22	0.03
		2000	1896	99	1902	125	0.69	14.8	17/09	0.02	15/05	2.0	0.32	0.03
025012	**Harwood Beck at Harwood** C.A: 25.1 km^2	**69..95**	**1612**		**1239**		**0.99**	**75.0**	**02/01 1976**	**0.01**	**12/10 1995**	**2.6**	**0.40**	**0.06**
M.A: EA	Local No: 3581 Sens.: 25.0 S/full: 17.5m^3s^{-1}													
F.A.R: N	Level: 374m UE: <.01 FAI: 1.000													
Comment: Flat V weir (1:2 crest slopes, 1:10 cross-slope) for low flow control at velocity-area station. Shallow gravel bedded reach. Natural, responsive regime. Low flows in 1995 due to repair work on weir resulting from boulder damage during high flow periods - flows to be reprocessed. # Small Pennine catchment developed mostly on Carboniferous L'st.		1996	1201	75	875	71	0.69	20.0	17/02	0.04	17/09	1.8	0.35	0.05
		1997	1424	88	1006	81	0.80	27.7	19/02	0.05	19/08	2.1	0.30	0.07
		1998	1818	113	1352	109	1.08	59.7	26/10	0.10	07/07	2.7	0.56	0.12
		1999	1771	110	1240	100	0.99	46.1	02/12	0.05	03/08	2.6	0.41	0.06
		2000	2011	125	1675	135	1.33	28.0	11/01	0.07	22/07	3.4	0.65	0.08
025018	**Tees at Middleton in Teesdale** C.A: 242.1 km^2	**71..95**	**1553**		**1157**		**8.96**	**389.1**	**31/01 1995**	**0.88**	**01/07 1976**	**19.2**	**4.96**	**2.51**
M.A: EA	Local No: 3505 Sens.: 6.1 B/full: 360.0m^3s^{-1}													
F.A.R: SR	Level: 211m UE: <.01 FAI: 0.940													
Comment: Velocity-area station with informal Flat V weir (limited modular range) for low-flow control constructed in 1972. Cableway. Replaced earlier station at Dent Bank. Straight reach, gravel and rock bed. Steep gradient. Flows affected by Cow Green Res. Maintenance on weir winter 1995/6 - flows to be reprocessed. # Mostly an upland catchment draining from the Pennines. Geology: largely Carboniferous L'st, some Millstone Grit.		1996	1153	74	824	71	6.31	124.4	17/02	1.82	08/02	13.2	4.10	2.47
		1997	1336	86	965	83	7.41	322.9	19/02	1.70	10/01	16.2	3.88	2.18
		1998	1719	111	1311	112	10.07	291.0	26/10	1.84	20/06	20.5	6.64	2.88
		1999	1656	107	1164	100	8.93	310.4	15/01	2.60	18/11	18.3	5.10	3.20
		2000	1901	122	1472	126	11.27	198.8	03/06	1.54	15/05	28.4	6.30	2.34
025008	**Tees at Barnard Castle** C.A: 509.2 km^2	**66..95**	**1335**		**842**		**13.60**	**509.7**	**23/03 1968**	**1.81**	**03/06 1970**	**30.3**	**7.32**	**3.52**
M.A: EA	Local No: 3504 Sens.: 3.9 S/full: 625.0m^3s^{-1}													
F.A.R: SRI	Level: 133m UE: <.01 FAI: 0.912													
Comment: Compound Crump weir 52.4m broad with central low flow crest (7m). Theoretical calibration (check gaugings up to medium flows). Full range and modular. Responsive regime. Six reservoirs in catchment including Cow Green (59 sq.km) which regulates flow for PWS abstractions and maintains min. d/s flows. Net export of water. Augmentation by Kielder transfer in drought years. # Predominantly an upland Pennine catchment developed mostly on Carboniferous L'st and Millstone Grit.		1996	1018	76	580	69	9.35	132.0	17/02	3.58	07/02	19.4	5.84	4.19
		1997	1173	88	760	90	12.27	374.0	19/02	3.68	19/10	25.3	6.25	4.26
		1998	1504	113	1125	134	18.17	318.7	08/01	4.19	21/03	40.0	11.11	5.20
		1999	1417	106	959	114	15.48	367.4	15/01	4.82	11/08	32.0	8.61	5.24
		2000	1720	129	1241	147	19.99	335.0	03/06	4.20	18/06	49.5	11.50	4.69
025006	**Greta at Rutherford Bridge** C.A: 86.1 km^2	**60..95**	**1126**		**823**		**2.25**	**210.5**	**25/08 1986**	**0.04**	**22/08 1995**	**5.8**	**0.78**	**0.11**
M.A: EA	Local No: 3523 Sens.: 19.9 B/full: 98.0m^3s^{-1}													
F.A.R: N	Level: 223m UE: <.01 FAI: 0.999													
Comment: Compound Crump profile weir, total width 19.2m, low flow crest 3m broad. Theoretical rating with check gaugings. Flows reprocessed from 1982 onwards in 2002. Responsive, natural regime. # An eastward draining Pennine catchment developed largely on Millstone Grit.		1996	916	81	617	75	1.68	41.0	05/11	0.06	22/07	4.9	0.64	0.09
		1997	1006	89	719	87	1.96	115.5	19/02	0.09	05/10	5.7	0.58	0.12
		1998	1250	111	968	118	2.64	82.7	24/10	0.16	25/05	6.9	1.19	0.19
		1999	1210	107	913	111	2.49	69.7	15/01	0.08	03/08	6.2	0.88	0.11
		2000	1547	137	1180	143	3.21	120.2	03/06	0.10	12/08	8.7	1.38	0.13
025001	**Tees at Broken Scar** C.A: 818.4 km^2	**56..95**	**1150**		**646**		**16.77**	**679.3**	**23/03 1968**	**0.02**	**16/10 1959**	**40.9**	**7.84**	**1.61**
M.A: EA	Local No: 3501 Sens.: 5.2 S/full: 420.0m^3s^{-1}													
F.A.R: SRP	Level: 37m UE: <.01 FAI: 0.943													
Comment: Compound Crump profile weir with total crest length of 63.9m. Two low-flow crests total 9.1m. Rating review completed by HR Wallingford in 1998. Revised rating serves to reduce high flows and has been used to reprocess flows back to 1982. Significant export of water from direct supply reservoirs and u/s abstraction. Some regulation from Cow Green Res. Transfers of water from Kielder in drought years. # A mainly impervious catchment developed on Millstone Grit and Carboniferous Limestone. Headwaters drain the Pennines. Moorland and rough pasture give way to more intensive agriculture in the lower reaches.		1996	912	79	396	61	10.24	135.8	17/02	3.13	31/08	22.7	5.94	3.37
		1997	1028	89	535	83	13.89	602.3	19/02	3.15	01/05	30.7	6.74	3.85
		1998	1305	113	894	138	23.19	482.0	24/10	4.00	18/05	53.9	14.14	4.97
		1999	1222	106	683	106	17.72	518.5	15/01	4.08	03/08	38.3	9.05	4.57
		2000	1525	133	927	143	24.00	663.6	03/06	3.50	06/08	63.4	12.48	4.31
025021	**Skerne at Bradbury** C.A: 70.1 km^2	**73..95**	**662**		**166**		**0.37**	**21.0**	**29/03 1979**	**0.02**	**03/08 1992**	**0.8**	**0.19**	**0.05**
M.A: EA	Local No: 3707 Sens.: 20.5 S/full: 1.4m^3s^{-1}													
F.A.R: SPGE	Level: 72m UE: .04 FAI: 0.962													
Comment: Velocity-area station with informal Flat V low-flow weir constructed in 1973. High flow control by bridge invert 10m below weir. Cableway. Small net export of water from headwater reservoirs. Several anomalous low flows in 1995 have been removed from NRFA. # SW trending catchment developed mostly on Magnesian L'st.		1996	559	84	98	59	0.22	5.4	12/02	0.05	09/11	0.4	0.10	0.05
		1997	655	99	146	88	0.32	6.0	02/07	0.05	04/11	0.7	0.08	0.05
		1998	823	124	248	149	0.55	5.6	03/11	0.05	13/05	1.5	0.25	0.11
		1999	696	105	163	98	0.36	5.6	07/03	0.09	06/10	0.7	0.18	0.10
		2000	919	139	286	172	0.63	11.1	07/11	0.05	12/09	1.6	0.19	0.11
025020	**Skerne at Preston le Skerne** C.A: 147.0 km^2	**72..95**	**644**		**174**		**0.81**	**26.6**	**28/03 1979**	**0.03**	**01/08 1992**	**1.7**	**0.39**	**0.10**
M.A: EA	Local No: 3705 Sens.: 28.9													
F.A.R: E	Level: 68m UE: .04 FAI: 0.981													
Comment: Velocity-area station with informal low-flow control constructed in 1978. Cableway. Straight approach. All flows contained in channel. Small export of water from 2 headwater reservoirs (servicing Hartlepoool), minewater additions affect parts of the early record. # Relatively dry catchment developed mainly on Magnesian Limestone, some Coal Measures. Mixed land use below moorland headwaters.		1996	565	88	113	65	0.52	16.3	12/02	0.08	23/10	1.3	0.22	0.09
		1997	635	99	129	74	0.60	12.9	19/12	0.09	29/10	1.6	0.17	0.09
		1998	797	124	240	138	1.12	14.9	03/11	0.16	20/09	2.6	0.51	0.20
		1999	668	104	164	94	0.76	15.2	07/03	0.13	13/10	1.7	0.33	0.15
		2000	886	138	318	183	1.48	23.3	07/11	0.17	18/03	3.4	0.38	0.19
025004	**Skerne at South Park** C.A: 250.1 km^2	**56..95**	**652**		**199**		**1.58**	**59.2**	**29/03 1979**	**0.20**	**02/08 1990**	**3.2**	**0.94**	**0.36**
M.A: EA	Local No: 3702 Sens.: 10.3 S/full: 51.0m^3s^{-1}													
F.A.R: GEI	Level: 34m UE: .06 FAI: 0.983													
Comment: Compound broad-crested weir. Significant sewage effluent component in low flows. Pumped minewaters can also augment flow (a declining contribution). Excess flow from the Cocker Beck diverted (u/s of Darlington) directly to the Tees. Fish pass constructed winter 1995/6 - flows to be reprocessed. Channel rehabilitation u/s to improve aquatic habitat and maintain low flows. # A catchment of mixed land use developed mostly on Magnesian L'st. Moorland headwaters, considerable urban development - with some industry - d/s.		1996	562	86	122	61	0.96	16.0	12/02	0.24	10/10	1.9	0.59	0.27
		1997	626	96										
		1998	760	117	216	109	1.71	*15.0*	*03/11*	0.37	13/08	3.9	0.98	0.41
		1999	846	99	168	84	1.33	19.1d	07/03	0.30	16/09	2.6	0.73	0.35
		2000	882	135	295	148	2.33	41.8	04/06	0.37	07/08	5.2	0.80	0.40
025009	**Tees at Low Moor** C.A: 1264.0 km^2	**69..95**	**968**		**457**		**18.31**	**464.5**	**31/01 1995**	**1.57**	**30/05 1978**	**43.5**	**9.35**	**2.81**
M.A: EA	Local No: Sens.: 9.5 S/full: 20.0m^3s^{-1}													
F.A.R: SRPGEI	Level: 4m UE: .02 FAI: 0.959													
Comment: Velocity-area station with Flat V low flow control constructed in 1974. Good calibration, confirmed at high flows. Lowest station on R. Tees. Substantial artificial influences on the flow regime - significant net export of water (but benefit of Kielder transfers during droughts). # Geology: mostly Carboniferous (Millstone Grit and Carb. L'st), some Magnesian L'st. Mixed land use below Pennine headwaters.		1996	787	81	321	70	12.82	153.8	19/12	3.02	08/09	29.4	7.38	3.40
		1997	893	92	405	89	16.25	398.4	19/02	2.15	11/09	42.0	7.34	2.88
		1998	1113	115	627	137	25.14	424.3	24/10	4.25	18/05	56.1	14.78	4.91
		1999	1024	106	521	114	20.88	401.0	15/01	3.05	12/08	48.1	10.83	3.78
		2000	1311	135	782	171	31.27	**469.7**	**04/06**	3.32	07/08	69.7	16.79	4.28

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
025005 Leven at Leven Bridge C.A: 196.3 km^2	**59..95**	**736**		**292**		**1.82**	**107.4**	**28/03**	**0.09**	**04/09**	**4.0**	**0.83**	**0.25**
M.A: EA Local No: 3802 Sens.: 23.0 S/full: 70.0m^3s^{-1}								**1979**		**1976**			
F.A.R: EN Level: 5m UE: <.01 FAI: 0.998													
Comment: Compound broad-crested weir, width 17.4m, with a bypass Crump profile weir width 4.6m. Theoretical rating (further confirmatory gaugings needed). Flows reprocessed from 1982. Sharp bend and road bridge just u/s of weirs and large drop below; suffers from siltation upstream of the weir which may affect calculated flows. Sensibly natural regime. # Mixed geology of mostly Permian/Jurassic age. Headwaters drain from the Cleveland Hills. Arable agriculture and some urban development in the lower valley.	1996	610	83	203	70	1.26	48.7	12/02	0.18	02/08	3.0	0.53	0.21
	1997	681	93	196	67	1.22	32.4	01/07	0.22	05/10	2.7	0.50	0.24
	1998	825	112	349	120	2.17	47.0	11/04	0.37	21/09	5.0	1.29	0.40
	1999	820	111	380	130	2.36	57.8	05/03	0.29	03/08	4.3	1.12	0.37
	2000	998	136	542	186	3.36	124.6	02/11	0.37	25/08	7.2	1.18	0.44
026005 Gypsey Race at Boynton C.A: 240.0 km^2	**81..95**	**697**		**24**		**0.18**	**2.4**	**17/01**	**0.00**	**05/10**	**0.5**	**0.03**	
M.A: EA Local No: 8913004 Sens.: 54.0 B/full: 3.8m^3s^{-1}								**1994**		**1995**			
F.A.R: GI Level: 17m UE: FAI:													
Comment: Flat V weir. Replaced the gauge d/s at Bridlington (26004). Some groundwater abstractions. Baseflow dominated regime; the Gypsey Race ceases to flow during prolonged droughts. Topographical and groundwater divides not coincident. # Predominantly rural, pervious (Chalk) catchment draining northern side of the Yorkshire Wolds.	1996	617	89	1	4	0.01	0.1	19/12	0.00	13/06	0.0	0.00	
	1997	706	101	1	4	0.01	0.1	30/06	0.00	30/05	0.0	0.00	
	1998	836	120	27	113	0.20	0.9	21/04	>0.00	11/10	0.5	0.16	0.01
	1999	805	115	44	183	0.33	1.6	25/03	>0.00	14/09	0.9	0.19	0.01
	2000	1039	149	65	271	0.49	3.0	20/12	0.03	01/01	2.0	0.17	0.05
026003 Foston Beck at Foston Mill C.A: 57.2 km^2	**59..95**	**712**		**346**		**0.63**	**3.3**	**15/02**	**0.06**	**24/03**	**1.3**	**0.51**	**0.12**
M.A: EA Local No: 8913120 Sens.: 14.1 S/full: 6.4m^3s^{-1}								**1979**		**1992**			
F.A.R: GN Level: 6m UE: <.01 FAI: 1.000													
Comment: Flows measured by a sharp-edged weir sluice gate. Theoretical rating. Pre-1976 the sluice position was not accurately recorded and the computed flows are less accurate. Small amount of groundwater abstractions (naturalised flows available from EA from 1980). # A predominantly rural catchment draining southern Chalk outcrop of the Yorkshire Wolds.	1996	592	83	181	52	0.33	1.2	12/02	0.12	16/12	0.7	0.26	0.13
	1997	698	98	137	40	0.25	0.9	01/07	0.17	03/01	0.3	0.24	0.18
	1998	802	113	444	128	0.81	1.7	18/01	0.36	12/10	1.3	0.76	0.38
	1999	780	110	445	129	0.81	2.2	25/03	0.30	20/10	1.6	0.61	0.32
	2000	986	138	561	162	1.01	2.8	22/11	0.47	04/10	2.0	0.80	0.51
026006 Elmswell Beck at Little Driffield C.A: 136.0 km^2	**80..95**	**724**		**124**		**0.53**	**4.1**	**20/05**	**0.00**	**01/12**	**1.4**	**0.24**	
M.A: EA Local No: 8913185 Sens.: 128.0								**1981**		**1995**			
F.A.R: GN Level: m UE: FAI:													
Comment: Thin-plate weir. Subject to occasional drowning due to weedgrowth - d/s chart recorder will enable non-modular flows to be revised if necessary. Largely natural, baseflow dominated regime but, possibly, a minor net export may occur (resulting from gw abstraction). The Beck is dry during prolonged drought conditions. # A rural catchment in the Yorkshire Wolds (Chalk).	1996	633	87	53	43	0.23	1.2	04/03	0.00	27/09	0.8	0.05	
	1997	760	105	45	36	0.19	1.1	31/12	0.05	24/06	0.3	0.17	0.06
	1998	841	116	190	153	0.82	2.2	18/01	0.05	21/10	1.8	0.70	0.06
	1999	830	115	156	126	0.67	2.0	21/03	0.06	17/10	1.6	0.42	0.07
	2000	1035	143	238	192	1.02	3.9	21/11	0.14	02/10	2.4	0.89	0.16
026009 West Beck at Snakeholme Lock C.A: 242.2 km^2	**88..95**	**660**		**203**		**1.56**	**8.1d**	**21/01**	**0.20**	**11/11**	**3.9**	**0.93**	**0.26**
M.A: EA Local No: Sens.:								**1994**		**1990**			
F.A.R: Level: m UE: FAI:													
Comment: Electromagnetic station - buried coil in the West Beck. Calibration incomplete; provisionally, flows up to around 8 m^3s^{-1} appear reasonable. Some spray irrigation but otherwise the net impact of artificial influences is trivial. Station adjacent to site measuring Driffield Canal. Estimated naturalised flows (1985-94) available from EA. # A rural catchment draining from the Yorkshire Wolds (Chalk). Catchment includes a SSSI.	1996	613	93	154	76	1.18	3.8d	26/02	0.25	09/11	3.0	0.80	0.28
	1997	731	111										
	1998	816	124	377	186	2.90	7.1d	18/01	0.73	12/10	5.4	2.60	0.82
	1999	809	123	330	163	2.54	6.3d	21/03	0.69	24/09	5.2	1.86	0.75
	2000	995	151	428	211	3.28	7.5d	28/11	0.87	06/10	6.6	3.13	0.99
026008 Mires Beck at North Cave C.A: 41.9 km^2	**86-95**	**638**		**147**		**0.19**	**4.1**	**13/09**	**0.01**	**29/06**	**0.4**	**0.14**	**0.03**
M.A: EA Local No: Sens.:								**1993**		**1992**			
F.A.R: G Level: m UE: FAI:													
Comment: Crump weir. D/s analogue recorder maintained to monitor non-modular conditions. Baseflow dominated; abstractions can influence the pattern of low flows - net diminution in runoff. # On SW edge of Yorkshire Wolds. Spring source on scarp slope. Jurassic strata 50% in W, Upper Cretaceous Chalk in E. Completely Drift free. Rural catchment, mostly arable, some forest.	1996	576	90	64	44	0.08	2.5	19/12	0.02	13/09	0.1	0.07	0.02
	1997	645	101	100	68	0.13	0.8	19/12	0.06	07/06	0.2	0.11	0.08
	1998	713	112	202	137	0.27	2.0	22/10	0.09	12/10	0.4	0.26	0.11
	1999	793	124	217	148	0.29	1.0	09/03	0.10	14/09	0.5	0.25	0.11
	2000	885	139	253	172	0.34	2.1	07/11	0.14	12/09	0.6	0.28	0.16
027050 Esk at Sleights C.A: 308.0 km^2	**70..95**	**885**		**493**		**4.82**	**358.7**	**25/03**	**0.12**	**26/08**	**10.1**	**2.23**	**0.58**
M.A: EA Local No: 8912903 Sens.: 7.9 S/full: 16.0m^3s^{-1}								**1979**		**1976**			
F.A.R: N Level: 5m UE: FAI:													
Comment: Velocity-area station with broad-crested masonry weir control (25m broad with fish-pass on lb, 0.71m lower). Flow records 1970-76 based on formula only - may be inaccurate. C/m rating developed by 1989 - reprocessing of data from 1977 completed. Sensibly natural flow regime. Superseded (1998) by new station at Brigsworth d/s. # Permeable headwaters (North York Moors - Jurassic) thence mainly Middle Oolite and Middle Lias, extensive Drift cover. A rural catchment with moorland headwaters.	1996	755	85	428	87	4.17	113.0	19/12	0.59	20/08	10.4	1.76	0.66
	1997	847	96	480	97	4.69	251.3	26/06	0.74	05/10	9.1	1.89	0.83
	1998	1062	120										
	1999	1049	119										
	2000	1290	146										
027090 Swale at Catterick Bridge C.A: 499.4 km^2	**92..95**	**1152**		**[illegible]**		**12.85**	**484.5**	**31/01**	**0.81**	**16/08**	**32.9**	**6.09**	**1.30**
M.A: EA Local No: Sens.:								**1995**		**1994**			
F.A.R: N Level: m UE: FAI:													
Comment: Velocity-area station with cableway plus two-path ultrasonic to monitor low flows. Full range, all flows contained. Supersedes 27024 (decommissioned in 1980). Abstraction for Catterick Camp u/s, otherwise natural regime. Flows from 1991 reprocessed in 2002 - all flows reduced. # Typical responsive Pennine catchment. Mostly upland pasture with some afforestation (and considerable gripping).	1996	909	79	603	74	9.53	198.8	05/11	1.31	22/07	21.3	6.20	1.51
	1997	1089	95	706	87	11.17	348.3	19/02	1.50	05/10	24.2	5.43	1.86
	1998	1292	112	926	114	14.66	273.8	08/01	1.98	26/09	35.2	8.61	2.88
	1999	1234	107	849	105	13.44	295.4	03/12	1.13	18/09	31.6	7.13	1.52
	2000	1564	136	1186	146	18.73	416.5	03/06	1.74	12/08	45.7	10.37	2.22
027075 Bedale Beck at Leeming C.A: 160.3 km^2	**83..95**	**692**		**419**		**2.13**	**121.3**	**26/08**	**0.23**	**30/09**	**3.5**	**0.89**	**0.31**
M.A: EA Local No: 8912330 Sens.: 12.6								**1986**		**1989**			
F.A.R: Level: 24m UE: FAI:													
Comment: Flat V weir, 1:10 cross-slope. High flow record is suspect - the structure drowns as a result of backing-up from the Swale (a chart recorder monitors d/s levels but processed flows assume modularity). Considerable spray irrigation in the lower reaches otherwise minimal artificial impact on flow regime.25/02-08/03/99 & 12-15/03/99 no records as instruments removed while work on site in progress. # Rural, W-E trending catchment draining from Bellerby Moor.	1996	593	86	254	61	1.29	36.9	19/12	0.28	20/08	2.2	0.78	0.34
	1997	639	92	386	92	1.96	108.2	19/02	0.30	05/10	2.9	0.65	0.34
	1998	822	119	650	155	3.30	98.4	09/01	0.54	17/09	6.8	1.48	0.56
	1999	720	104										
	2000	1026	148	1146	274	5.81	**127.7**	**04/06**	0.53	08/09	11.2	1.42	0.60
027071 Swale at Crakehill C.A: 1363.0 km^2	**55..95**	**849**		**451**		**19.50**	**255.7**	**07/03**	**0.86**	**27/09**	**43.5**	**11.74**	**3.34**
M.A: EA Local No: 8912302 Sens.: 7.6								**1963**		**1959**			
F.A.R: N Level: 12m UE: FAI:													
Comment: Crump profile weir with high flow calibration based on u/s cableway (at Leckby Grange). Flows prior to Jun 1980 derived exclusively from Leckby Grange (27008, C.A.: 1345.6 sq.km - variable low flow control, weedgrowth especially severe in 1976 - Jul/Aug flows estimated). Sensibly natural regime, flashy response. # Rural catchment draining N Yorkshire Dales, lower catchment in the flat Vale of York. Mixed geology - mainly l'sts, s'sts (especially below Richmond) and shales; covering of Boulder Clay.	1996	697	82	326	72	14.05	138.9d	13/02	2.51	22/07	30.2	9.18	2.71
	1997	804	95	395	88	17.06	201.1d	21/02	3.04	05/10	47.5	7.95	3.43
	1998	979	115	622	138	26.90	201.7	09/01	4.31	26/09	68.9	15.50	5.64
	1999	908	107	540	120	23.36	190.2	16/01	3.35	18/09	60.7	11.77	4.01
	2000	1192	140	861	191	37.12	246.1	03/11	4.52	12/08	94.7	17.77	5.26
027082 Cundall Beck at Bat Bridge C.A: 23.5 km^2	**87-95**	**598**		**223**		**0.17**	**27.3**	**01/02**	**0.02**	**15/06**	**0.2**	**0.08**	**0.03**
M.A: EA Local No: 8912311 Sens.: 32.0								**1995**		**1992**			
F.A.R: IN Level: 14m UE: FAI:													
Comment: Flat V weir, 1:10 cross-slope(superseded an original sharp-edged weir). Drowning is rare and flow regime is largely natural. Flow augmentation tests from boreholes have affected flows since 1989. # A low-lying, relatively flat catchment - developed on Permo-Triassic sandstones - draining to the Swale. Land use: dominantly agricultural.	1996	511	85	118	53	0.09	7.0	13/02	0.02	25/06	0.1	0.05	0.02
	1997	584	98	102	46	0.08	3.7	22/02	0.02	04/10	0.1	0.05	0.02
	1998	770	129	293	131	0.22	7.2	10/01	0.04	21/09	0.3	0.10	0.04
	1999	647	108	239	107	0.18	13.3	16/01	0.03	28/08	0.2	0.09	0.04
	2000	908	152										

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
027047	**Snaizeholme Beck at Low Houses** C.A: 10.2 km^2	**72..95**	**1773**		**1741**		**0.56**	**16.4**	**31/01 1995**	**0.01**	**22/08 1995**	**1.5**	**0.19**	**0.02**
M.A: EA	Local No: 8912290 Sens.: 36.1 S/full: 7.0m^3s^{-1}													
F.A.R: N	Level: 260m UE: FAI:													
Comment: Concrete Flat V weir superseded (in 1985) a limited capacity, wooden trapezoidal flume (installed late-1960s); structurefull now 0.95m - bypassing now less common. Flashy, natural regime. Systematic underestimation of rainfall may contribute to unrealistic 'loss'. Also possibility of minor increase in runoff due to spring water deriving from outside the topographical catchment (see geology). # Wet, steep catchment in the Pennines developed mainly on Carboniferous Limestone; some Millstone Grit on south-east boundary. Land use is mostly rough grazing.		1996	1313	74	1138	65	0.37	16.3	05/11	0.02	25/07	1.1	0.14	0.02
		1997	1725	97	1513	87	0.49	14.7	01/03	0.01	22/07	1.6	0.12	0.02
		1998	2030	114	1963	113	0.63	14.7	24/10	0.02	25/05	1.7	0.28	0.04
		1999	2084	118	1865	107	0.60	15.3	02/12	0.02	02/08	1.5	0.23	0.03
		2000	2458	139	2317	133	0.75	14.2	03/06	0.01	28/07	2.2	0.29	0.03
027034	**Ure at Kilgram Bridge** C.A: 510.2 km^2	**67..95**	**1361**		**960**		**15.53**	**380.4**	**31/01 1995**	**0.28**	**25/08 1976**	**38.5**	**7.69**	**1.09**
M.A: EA	Local No: 8912206 Sens.: 17.6 B/full: 375.0m^3s^{-1}													
F.A.R: P	Level: 88m UE: <.01 FAI: 0.990													
Comment: Velocity-area station rated by c/m. Low flow control is exercised by the sill of Kilgram Bridge 70m d/s. Flows <1 m^3s^{-1} underestimated, data has been reprocessed. Some floodplain storage. Thorton Steward abstraction (operational from 1977) is just u/s. # Geology: mainly Carboniferous L'st and Millstone Grit. Rural catchment draining from the Pennines.		1996	1041	76	664	69	10.72	185.7	06/11	0.79	27/07	25.0	5.85	0.91
		1997	1228	90	841	88	13.61	269.6	19/02	1.08	22/08	30.8	5.00	1.39
		1998	1531	112	1198	125	19.38	243.4	24/10	1.71	24/09	44.8	11.45	2.40
		1999	1507	111	1149	120	18.59	287.4	03/12	1.27	17/09	43.9	9.35	1.59
		2000	1887	139	1514	158	24.43	298.8	04/06	1.37	27/07	61.6	13.74	1.70
027059	**Laver at Ripon** C.A: 87.5 km^2	**77..95**	**930**		**377**		**1.05**	**39.1**	**28/12 1978**	**0.05**	**18/08 1995**	**2.4**	**0.51**	**0.09**
M.A: EA	Local No: 8912220 Sens.: 13.4 S/full: 39.1m^3s^{-1}													
F.A.R: SP	Level: 30m UE: <.01 FAI: 0.981													
Comment: Crump profile weir, 10m wide. Theoretical rating. Insensitive at low flows, but a notch in the stilling basin toe wall could be used for very low flow measurement. Small export of water. # Geology: mostly Millstone Grit and Magnesian L'st. A predominantly rural catchment below moorland (Pennine) headwaters. There are some swallow holes in the lower part of the catchment.		1996	788	85	242	64	0.67	16.1	19/12	0.09	19/08	1.5	0.37	0.11
		1997	852	92	292	77	0.81	19.1	20/02	0.09	04/10	2.1	0.33	0.13
		1998	1120	120	513	136	1.42	20.9	08/01	0.17	21/09	3.6	0.77	0.22
		1999	918	99	354	94	0.98	28.8	03/12	0.11	04/09	2.6	0.46	0.12
		2000	1238	133	663	176	1.83	62.7	02/11	0.17	08/09	4.0	0.90	0.20
027086	**Skell at Alma Weir** C.A: 119.5 km^2	**84..95**	**886**		**382**		**1.45**	**42.6**	**17/04 1986**	**0.06**	**06/09 1991**	**3.3**	**0.80**	**0.14**
M.A: EA	Local No: 8912216 Sens.: 20.6													
F.A.R: G	Level: 23m UE: FAI:													
Comment: Flat V weir. Considerable accretion on u/s apron. Substantial modular range. Offtake to Ripon Canal feeder is u/s. Swallow holes u/s of Laver/Skell confluence greatly reduce summer flows. # A rural catchment below moorland (Pennine) headwaters. Developed mostly on Millstone Grit and Magnesian L'st.		1996	787	89	275	72	1.04	22.8	19/12	0.11	25/09	2.1	0.65	0.14
		1997	840	95	304	80	1.15	24.5	20/02	0.14	29/09	2.9	0.49	0.17
		1998	1108	125	539	141	2.04	33.8	27/10	0.20	21/09	4.7	1.22	0.28
		1999	909	103	385	101	1.46	35.9	03/12	0.10	12/09	3.7	0.75	0.14
		2000	1225	138	704	184	2.66	76.6	02/11	0.20	08/09	5.8	1.46	0.26
027007	**Ure at Westwick Lock** C.A: 914.8 km^2	**58..95**	**1133**		**722**		**20.95**	**628.6**	**01/02 1995**	**0.88**	**25/08 1976**	**50.1**	**10.85**	**2.71**
M.A: EA	Local No: 8912202 Sens.: 10.6													
F.A.R: SP	Level: 14m UE: <.01 FAI: 0.983													
Comment: Broad-crested masonry weir, 59m wide, c/m rated - cableway 0.26km d/s (replaced earlier rated section a short distance d/s - Boroughbridge weir was thought to act as partial control). Flows from 1982 reprocessed in 2002. Notable effects on low flows and some reduction on high flows. Pre-1982 data still to be reprocessed. Some out-of-bank flooding at very high flows - peaks may be underestimated. Reservoirs have significant effect on the Burn and Laver but moderate overall impact; some net export of water. 'Grip' drainage also influential. # Mixed geology of limestone and grits. Large, predominantly rural catchment draining from the Pennines.		1996	904	80	531	74	15.37	168.9	06/11	2.55	21/08	37.0	9.70	2.73
		1997	1024	90	642	89	18.63	289.9	20/02	2.88	19/08	45.5	8.04	3.37
		1998	1302	115	911	126	26.41	282.6	09/01	3.74	25/09	62.6	15.98	4.81
		1999	1222	108	801	111	23.24	304.1	03/12	2.53	06/09	55.4	12.24	2.88
		2000	1568	138	1172	162	33.90	439.1	03/11	2.92	24/07	76.9	20.27	3.53
027053	**Nidd at Birstwith** C.A: 217.6 km^2	**75..95**	**1259**		**695**		**4.80**	**203.4**	**08/03 1979**	**0.46**	**21/08 1984**	**12.1**	**2.38**	**0.78**
M.A: EA	Local No: 8912106 Sens.: 9.9													
F.A.R: SRP	Level: 67m UE: <.01 FAI: 0.916													
Comment: Velocity-area station approximately 17m wide, rated by current meter to 83 m^3s^{-1} from the bridge at the section. Riffle control, may be subject to erosion. Heavily reservoired catchment (Gouthwaite) with substantial effect on flows. Record has been reworked from 1982. Rating revised in 1999 to account for a change in channel dimensions caused by the 1991 flood; flows reworked. # Geology: mostly Millstone Grit. Rural catchment.		1996	1071	85	423	61	2.91	41.0	19/12	0.71	19/08	7.2	1.51	0.77
		1997	1154	92	533	77	3.68	91.9	20/02	0.85	05/10	11.2	1.33	0.88
		1998	1499	119	856	123	5.91	119.2	27/10	0.82	26/09	14.4	2.67	0.90
		1999	1318	105	735	106	5.07	92.4	06/12	0.86	15/09	13.4	2.35	1.09
		2000	1723	137	1160	167	7.98	154.1	30/10	0.78	20/08	17.9	4.00	0.88
027051	**Crimple at Burn Bridge** C.A: 8.1 km^2	**72..95**	**833**		**417**		**0.11**	**7.4**	**09/12 1983**	**>0.00**	**01/09 1995**	**0.3**	**0.04**	**0.01**
M.A: EA	Local No: 8912120 Sens.: 54.0													
F.A.R: N	Level: 112m UE: <.01 FAI: 1.000													
Comment: Flat V weir, 3.5m wide. Theoretical rating. Subcatchment flows have been measured by Leeds University. No artificial influences. Low flows may be affected by structural leakage (but wooden wingwalls upgraded to concrete in 1999 - construction work affected recorded levels). # Geology: Carboniferous shales and grits. Rural catchment, mainly used for pasture.		1996	776	93	288	69	0.07	2.8	19/12	>0.00	21/07	0.2	>0.00	>0.00
		1997	793	95	302	72	0.08	2.8	25/06	0.01	09/08	0.2	0.03	0.01
		1998	988	119	529	127	0.14	5.5	02/06	0.01	19/08	0.3	0.07	0.01
		1999	846	102	392	94	0.10	3.6	07/06	>0.00	04/09	0.3	0.04	0.01
		2000	1202	144	736	176	0.19	7.6	01/11	0.01	04/09	0.5	0.09	0.01
027001	**Nidd at Hunsingore Weir** C.A: 484.3 km^2	**35..95**	**971**		**522**		**8.01**	**282.3**	**15/09 1993**	**0.22**	**28/08 1943**	**18.7**	**4.44**	**1.60**
M.A: EA	Local No: 8912104 Sens.: 11.4 B/full: 376.0m^3s^{-1}													
F.A.R: SRPE	Level: 18m UE: .03 FAI: 0.954													
Comment: Broad-crested weir, breadth 49.8m. Rated by formulae, subsequently by C/M gaugings. Insensitive. Operation of by-pass sluice in the 1980s caused difficulties; flows subsequently revised. High flows overestimated. Low flows monitored d/s at Skip Bridge since 1979 - 12 m^3s^{-1} is a sensible split between the two records. Heavily reservoired headwaters (Angram, Scar House, Gouthwaite influence runoff, the latter especially significant during drought conditions). Overall net export of water. # Geology: Mainly Millstone Grit, Magnesian L'st and some marls. Predominantly rural, rugged in headwaters.		1996	856	88	339	65	5.19	89.6	20/12	1.21	19/09	11.3	3.21	1.32
		1997	914	94	396	76	6.09	197.6	21/02	1.52	29/10	16.2	2.75	1.63
		1998	1166	120	672	129	10.32	209.8	24/10	1.76	22/09	22.3	5.65	2.00
		1999	1029	106	509	98	7.82	101.7	15/01	1.50	14/09	19.9	3.97	1.72
		2000	1363	140	932	179	14.27	**444.2**	**31/10**	1.42	25/08	27.6	6.95	1.60
027009	**Ouse at Skelton** C.A: 3315.0 km^2	**69..95**	**901**		**466**		**48.97**	**622.0**	**05/01 1982**	**3.69**	**23/08 1995**	**122.7**	**26.45**	**7.29**
M.A: EA	Local No: 8912405 Sens.: 3.2													
F.A.R: SRPGI	Level: 5m UE: .01 FAI: 0.983													
Comment: Multi-path (cross-configuration) US from 1992. Previously: VA station, control exercised mainly by Naburn weir - but rating independent of sluice-gate settings was employed 1982-92. Pre-1982 records are less reliable, esp. at low flows, and will be reprocessed. PWS abstraction u/s - increasing impact on very low flows; some artificial groundwater augmentation now a counterbalancing influence. # Mixed geology. Predominantly rural catchment draining north parts of Vale of York and Yorkshire Dales.		1996	745	83	310	67	32.50	232.8d	13/02	5.22	20/08	75.1	21.64	5.97
		1997	844	94	373	80	39.18	394.7d	21/02	6.70	05/10	111.1	19.47	7.45
		1998	1049	116	598	128	62.86	331.4d	09/01	9.36	25/09	153.7	38.67	12.61
		1999	972	108	513	110	53.97	314.7d	16/01	6.82	18/09	151.2	30.14	7.93
		2000	1268	141	777	167	81.41	513.8d	03/11	8.38	13/08	197.1	49.06	10.15
027083	**Foss at Huntington** C.A: 118.0 km^2	**87..95**	**600**		**184**		**0.69**	**10.2d**	**26/02 1994**	**0.03**	**29/06 1992**	**1.7**	**0.27**	**0.05**
M.A: EA	Local No: 8912470 Sens.:													
F.A.R: EN	Level: 8m UE: FAI:													
Comment: Electromagnetic gauging station. Buried coil (small relative to channel width under high flow conditions); no cableway. Backing-up from Foss Barrier (in York). All flows contained. Data under review. # Headwaters on Yearsley Moor but catchment is mostly located in Vale of York. Mixed geology and dominantly rural above the lowest reaches.		1996	512	85											
		1997	595	99	132	72	0.49	7.0d	20/12	0.06	16/08	1.2	0.23	0.08
		1998	713	119	262	142	0.98	7.0d	03/01	0.09	19/08	2.4	0.54	0.11
		1999	679	113	249	135	0.93	10.1d	08/06	0.07	02/08	2.4	0.48	0.09
		2000	852	142	362	197	1.35	**15.6d**	**03/11**	0.08	12/08	3.2	0.60	0.10
027032	**Hebden Beck at Hebden** C.A: 22.2 km^2	**66..95**	**1437**		**246**		**0.17**	**5.9**	**12/01 1984**	**0.01**	**19/08 1983**	**0.4**	**0.10**	**0.03**
M.A: EA	Local No: 8911960 Sens.: 4.2 S/full: 6.0m^3s^{-1}													
F.A.R: P	Level: 228m UE: <.01 FAI: 0.997													
Comment: Thin-plate V notch (half 90 degree) in parallel with 3.35m wide Crump profile weir. V notch capacity limited by horizontal cut-off wall, at high flows it acts as a submerged orifice. Steep stream with heavy bedload - substantial u/s accretion, some erosion evident on weir surfaces. Some abstraction (27032 monitors residual flow), but predominantly natural flow regime. Numerous swallow holes and resurgences; true drainage area uncertain. # Upland catchment; mostly moorland developed on Carb. L'st, Millstone Grit and shales.		1996	1249	87	201	82	0.14	2.6	05/11	0.03	22/09	0.3	0.08	0.03
		1997	1345	94	220	89	0.15	3.4	04/05	0.03	22/08	0.4	0.09	0.04
		1998	1760	122	320	130	0.23	**10.2**	**26/10**	0.04	06/12	0.5	0.13	0.05
		1999	1584	110	247	100	0.17	5.2	02/12	0.03	13/09	0.4	0.08	0.03
		2000	2081	145	374	152	0.26	6.3	30/10	0.04	10/08	0.7	0.13	0.04

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
027043	**Wharfe at Addingham** C.A: 427.0 km^2	**73..95**	**1395**		**1038**		**14.05**	**413.3**	**02/01 1982**	**0.82**	**25/08 1976**	**35.0**	**6.55**	**1.57**
M.A: EA	Local No: 8911903 Sens.: 10.0													
F.A.R: SP	Level: 80m UE: <.01 FAI: 0.975													
Comment: Crump profile crest, 12m wide (theoretical rating), in a broad-crested weir, 48m overall width. C/m cableway 4km d/s (Ilkley). Revised rating still to be applied to pre-1982 data - it will significantly reduce high flows. Flashy flow regime substantially influenced by reservoir operation (Grimwith regulation releases from Jun 1984). Sig. u/s abstraction at Lobwood (from 1980). # Geology: Carboniferous l'st, shales and s'sts. Predominantly rural catchment.		1996	1190	85	665	64	8.97	177.0	05/11	1.25	30/01	21.9	4.01	1.62
		1997	1296	93	848	82	11.48	195.1	19/02	1.56	12/08	27.2	5.04	2.12
		1998	1667	119	1246	120	16.87	142.8d	08/01	2.76	11/07	40.0	9.38	3.16
		1999	1543	111	1103	106	14.94	295.3	06/12	1.66	05/08	36.2	7.33	2.10
		2000	1958	140	1495	144	20.19	378.1	30/10	1.73	30/07	52.7	10.47	2.28
027002	**Wharfe at Flint Mill Weir** C.A: 758.9 km^2	**55..95**	**1146**		**713**		**17.16**	**368.3**	**01/02 1995**	**0.43**	**23/06 1957**	**40.9**	**9.34**	**2.30**
M.A: EA	Local No: 8912004 Sens.: 14.2 B/full: 600.0m^3s^{-1}													
F.A.R: SRPI	Level: 14m UE: .01 FAI: 0.905													
Comment: Broad-crested masonry weir 47m wide; c/m cableway 1.5km u/s (moved to new US station at Tadcaster in 1990). Insensitive at low flows. Level data: 1936-1955. Recalibration (from 1965) completed but flows reprocessed from 1982 only. Pre-1965 data less reliable. Mill race opened in early 1990s (not rated) so flows not reliable. Regulation effect of headwater reservoirs evident at low flows. Small net export of water (inc. Bradford supply). # Mixed geology - mainly Carboniferous Limestone, grits and Coal Measures. Predominantly rural catchment with moorland headwaters.		1996	1023	89	435	61	10.43	162.2	06/11	1.82	28/07	25.1	4.81	2.15
		1997	1081	94	561	79	13.50	187.6	19/02	2.26	19/08	32.8	6.79	2.86
		1998	1377	120	868	122	20.88	255.8	07/03	3.44	27/05	51.6	11.85	3.97
		1999	1259	110	765	107	18.40	263.7	06/12	2.39	06/08	45.7	9.55	2.92
		2000	1629	142	1097	154	26.32	414.9	31/10	2.64	23/07	58.6	14.97	3.03
027089	**Wharfe at Tadcaster** C.A: 818.0 km^2	**91..95**	**1121**		**605**		**15.68**	**209.0d**	**01/02 1995**	**1.23**	**13/09 1991**	**38.2**	**7.44**	**2.08**
M.A: EA	Local No: Sens.:													
F.A.R: SRPI	Level: 7m UE: FAI:													
Comment: Multi-path ultrasonic gauging station (cross configuration). Rating has been reworked (1997). Attenuation of US signal can be a problem in summer due to siltation. Bed scouring during 1991 flood necessitated recalibration. Regulation effect of headwater reservoirs evident at low flows, small net export of water. May supersede Flint Mill (27002). # Mainly Carboniferous L'st, grits and Coal Measures, some Magnesian L'st above Tadcaster. A largely rural catchment - moorland (Pennine) headwaters, significant development in the lower valley.		1996	998	89	413	68	10.67	120.5d	06/11	0.91	19/08	25.2	5.15	1.49
		1997	1057	94	559	92	14.49	105.1d	21/02	2.51	21/08	35.1	7.71	3.53
		1998	1340	120	890	147	23.09	145.3d	07/03	4.31	29/09	54.8	13.98	5.38
		1999	1225	109	767	127	19.88	150.3d	03/03	3.10	06/08	47.1	11.05	3.68
		2000	1578	141	1102	182	28.51	254.7d	31/10	3.61	25/07	62.9	17.18	4.20
027055	**Rye at Broadway Foot** C.A: 131.7 km^2	**74..95**	**899**		**515**		**2.15**	**82.3**	**21/03 1981**	**0.36**	**15/09 1990**	**3.8**	**1.36**	**0.49**
M.A: EA	Local No: 8912508 Sens.: 22.3 S/full: 8.0m^3s^{-1}													
F.A.R: N	Level: 38m UE: <.01 FAI: 0.998													
Comment: Limited range Crump profile weir, 15m wide. Theoretical rating. Low modular limit, higher flows are unreliable – substantial overestimation. Sensibly natural regime. # Geology: Jurassic l'st, shales and s'sts. Rural catchment draining the Cleveland Hills.		1996	744	83	386	75	1.61	37.9	12/02	0.40	19/08	3.3	1.00	0.42
		1997	833	93	377	73	1.57	39.0	30/06	0.50	05/10	3.2	1.00	0.53
		1998	1046	116	607	118	2.54	76.8	10/04	0.67	26/09	4.7	1.75	0.78
		1999	1019	113	711	138	2.97	**129.2**	**07/03**	0.58	04/08	4.4	1.71	0.65
		2000	1203	134	864	168	3.60	**141.1**	**02/11**	0.61	09/09	6.5	1.80	0.66
027049	**Rye at Ness** C.A: 238.7 km^2	**74..95**	**862**		**452**		**3.42**	**74.1**	**12/09 1976**	**0.50**	**15/09 1990**	**6.6**	**2.50**	**0.73**
M.A: EA	Local No: 8912505 Sens.: 8.0 S/full: 32.1m^3s^{-1}													
F.A.R: GN	Level: 26m UE: <.01 FAI: 0.999													
Comment: Flat V weir, 12m wide. Theoretical rating. Significant gw abstractions. # Geology: Jurassic l'st, clays and s'sts. Predominantly rural catchment with moorland headwaters.		1996	689	80	303	67	2.29	35.8	12/02	0.53	19/09	5.0	1.47	0.59
		1997	788	91	301	67	2.28	27.2	01/07	0.76	05/10	4.7	1.56	0.80
		1998	988	115	568	126	4.30	64.9	11/04	1.17	26/09	8.7	3.31	1.43
		1999	964	112	586	130	4.44	**96.3**	**07/03**	0.82	15/09	7.0	3.22	0.98
		2000	1138	132	751	166	5.67	**104.3**	**03/11**	0.95	09/09	10.7	3.17	1.06
027058	**Riccal at Crook House Farm** C.A: 57.6 km^2	**74..95**	**832**		**240**		**0.44**	**18.4**	**03/01 1982**	**0.16**	**28/08 1976**	**0.8**	**0.27**	**0.19**
M.A: EA	Local No: 8912580 Sens.: 15.0 S/full: 3.5m^3s^{-1}													
F.A.R: N	Level: 30m UE: <.01 FAI: 1.000													
Comment: Limited range Flat V weir, 4m wide. Theoretical rating. Low modular limit, higher flows are only approximate. # Geology: shales, s'sts and l'sts. Rural catchment draining the North York Moors.		1996	690	83	154	64	0.28	6.1	12/02	**0.15**	**02/10**	0.5	0.20	0.15
		1997	816	98	154	64	0.28	12.0	31/08	0.17	26/09	0.4	0.21	0.18
		1998	999	120	269	112	0.49	10.8	10/04	0.21	12/10	1.0	0.30	0.23
		1999	986	119	268	112	0.49	16.8	07/03	0.21	02/09	0.8	0.28	0.22
		2000	1148	138	359	150	0.65	**22.7**	**30/10**	0.21	14/09	1.3	0.32	0.22
027054	**Hodge Beck at Cherry Farm** C.A: 37.1 km^2	**74..95**	**941**		**550**		**0.65**	**17.4**	**21/03 1981**	**0.09**	**23/08 1976**	**1.3**	**0.41**	**0.13**
M.A: EA	Local No: 8912570 Sens.: 16.7 S/full: 3.6m^3s^{-1}													
F.A.R: N	Level: 38m UE: <.01 FAI: 1.000													
Comment: Limited range Flat V weir, 6m wide. Theoretical rating. Superseded the gauge u/s at Bransdale (27010). Flows unaffected by artificial influences. # Geology: mainly shales and s'sts. Rural catchment.		1996	813	86	399	73	0.47	8.1	12/02	0.09	19/08	1.1	0.25	0.10
		1997	932	99	422	77	0.50	**21.0**	**31/08**	0.13	05/10	1.1	0.28	0.14
		1998	1140	121	610	111	0.72	12.8	10/04	0.14	19/08	1.6	0.47	0.16
		1999	1102	117	650	118	0.76	17.2	20/04	0.13	02/08	1.6	0.46	0.14
		2000	1295	138	782	142	0.92	**30.5**	**30/10**	0.16	25/08	2.0	0.52	0.18
027042	**Dove at Kirkby Mills** C.A: 59.2 km^2	**72..95**	**912**		**563**		**1.06**	**56.4**	**12/09 1976**	**0.13**	**22/08 1995**	**2.0**	**0.74**	**0.21**
M.A: EA	Local No: 8912560 Sens.: 13.6													
F.A.R: N	Level: 36m UE: <.01 FAI: 1.000													
Comment: Flat V weir, 8m wide. Theoretical rating. Predominantly natural flows. Subsurface inflow from R. Seven catchment (27057) may represent a significant proportion of summer baseflow. # Jurassic limestone, clays and sandstone. Rural catchment with moorland headwaters.		1996	779	85	423	75	0.79	25.5	12/02	0.15	19/08	1.8	0.48	0.17
		1997	892	98	441	78	0.83	25.0	31/08	0.20	05/10	1.7	0.50	0.23
		1998	1074	118	693	123	1.30	50.9	10/04	0.25	26/09	2.5	0.92	0.28
		1999	1040	114	765	136	1.44	49.5	07/03	0.20	03/08	2.3	0.86	0.24
		2000	1231	135	950	169	1.78	**65.9**	**30/10**	0.31	28/07	2.9	0.95	0.36
027057	**Seven at Normanby** C.A: 121.6 km^2	**74..95**	**898**		**466**		**1.80**	**145.4**	**13/09 1993**	**0.04**	**14/08 1976**	**3.3**	**0.79**	**0.17**
M.A: EA	Local No: 8912540 Sens.: 22.3 S/full: 6.1m^3s^{-1}													
F.A.R: N	Level: 29m UE: FAI:													
Comment: Limited range Crump profile weir, 8m wide. Theoretical rating. Low modular limit. Assumption of modularity implies high (and, possibly, lower) flows are of limited precision. Loss of water underground to the adjacent R. Dove (27042) has significant impact on summer baseflow. # Geology: Jurassic L'st, shales and s'sts. Rural catchment with moorland headwaters. Contains significant areas of forestry.		1996	732	82	368	79	1.42	89.2	12/02	0.10	05/08	2.5	0.49	0.14
		1997	849	95	387	83	1.49	87.2	30/06	0.18	27/08	2.6	0.53	0.21
		1998	1022	114	632	136	2.44	136.1	10/04	0.22	16/08	4.6	1.09	0.27
		1999	999	111	706	152	2.72	114.5	07/03	0.13	02/08	3.5	0.94	0.23
		2000	1206	134				141.8	30/10					
027056	**Pickering Beck at Ings Bridge** C.A: 68.6 km^2	**74..95**	**843**		**389**		**0.85**	**40.2**	**14/09 1993**	**0.14**	**24/08 1976**	**1.5**	**0.56**	**0.20**
M.A: EA	Local No: 8912515 Sens.: 21.2 S/full: 4.0m^3s^{-1}													
F.A.R: N	Level: 28m UE: FAI:													
Comment: Limited range Crump profile weir, 7m wide. Theoretical rating. Low modular limit, higher flows are only approximate. Flow unaffected by artificial influences. # Geology: mostly grits and l'sts. Rural catchment draining parts of the North York Moors.		1996	717	85	250	64	0.54	9.0	20/12	0.17	11/10	1.0	0.37	0.18
		1997	790	94	246	63	0.54	13.9	30/06	0.20	03/10	0.8	0.34	0.21
		1998	1002	119	426	110	0.93	28.3	11/04	0.26	22/09	1.6	0.68	0.30
		1999	971	115	521	134	1.13	39.6	06/03	0.28	18/09	1.4	0.66	0.30
		2000	1175	139	661	170	1.43	34.3	08/11	0.36	26/07	2.0	0.70	0.38
027038	**Costa Beck at Gatehouses** C.A: 7.8 km^2	**70..95**	**699**		**2317**		**0.57**	**4.9**	**14/09 1993**	**0.28**	**11/09 1990**	**0.8**	**0.54**	**0.36**
M.A: EA	Local No: 8912518 Sens.: 12.8													
F.A.R: G	Level: 22m UE: .03 FAI: 0.983													
Comment: Crump profile weir 5m wide. Theoretical rating. Weedgrowth can cause drowning. Missing data for May-June in both 2000 and 2001; values removed from archive due to effects of weed growth. Some bypassing of gauge via West Drain. Data indicates that groundwater catchment greatly exceeds topographical catchment. Flows predominantly natural apart from some pumping at Keldhead Spring and abstractions/returns from some cress beds and a trout farm. # Small rural catchment on southern edge of North York Moors. Geology: permeable Oolitic Limestone.		1996	580	83	1798	78	0.44	0.9	12/02	0.35	27/08	0.6	0.42	0.36
		1997	687	98	1753	76	0.43	0.9	31/08	0.36	01/10	0.5	0.43	0.37
		1998	830	119	2772	120	0.69	2.4	27/07	0.41	29/09	1.0	0.67	0.44
		1999	794	114	2741	118	0.68	2.3	06/03	0.48	17/11	0.9	0.64	0.50
		2000	948	136				4.21	30/10					

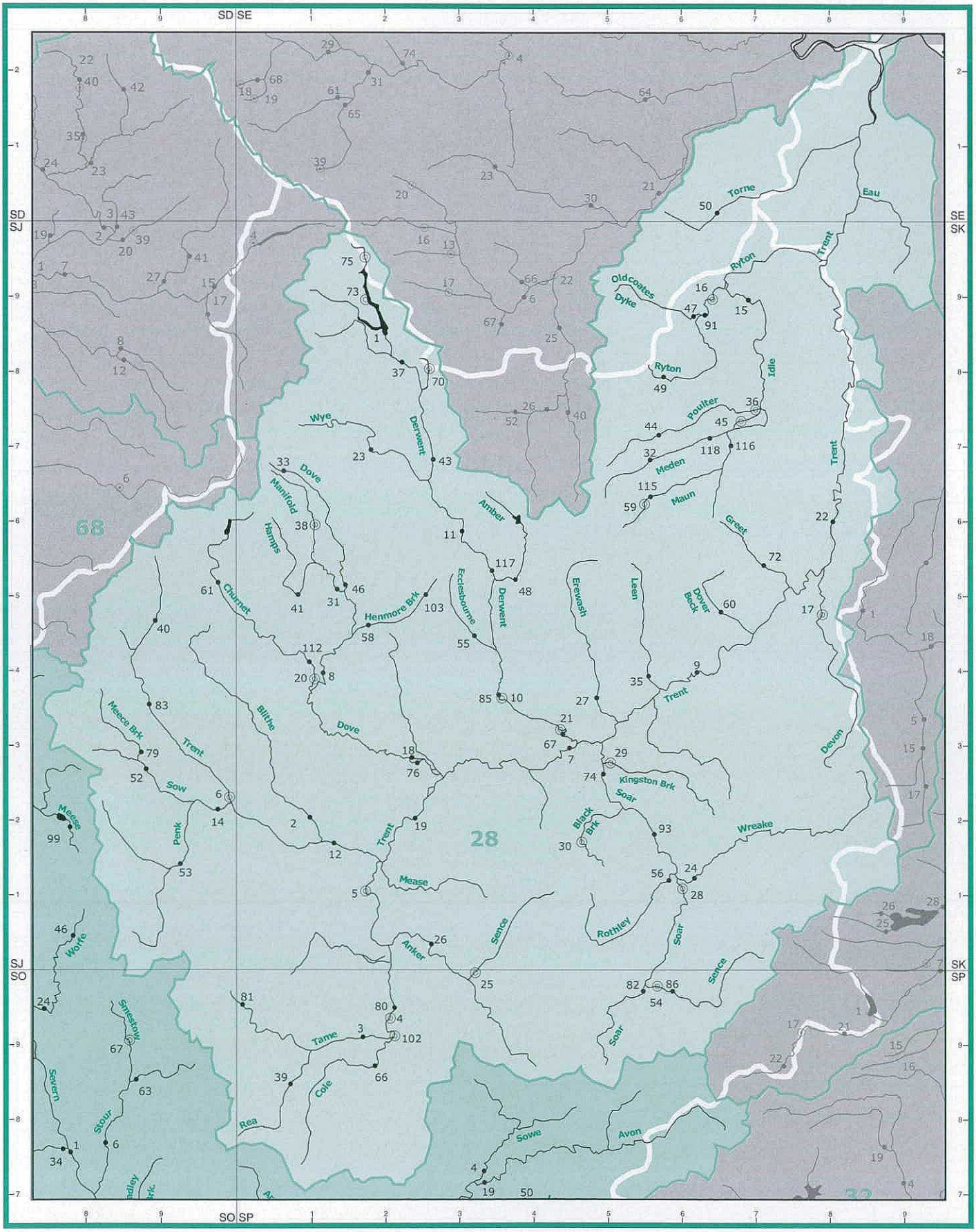
		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
027048	**Derwent at West Ayton** C.A: 127.0 km^2	**72..95**	**853**		**80**		**0.32**	**4.2**	**07/12 1995**	**0.00**	**10/09 1992**	**0.6**	**0.26**	**0.04**
M.A: EA	Local No: 8912708 Sens.: 36.4 S/full: 7.2m^3s^{-1}													
F.A.R: PG	Level: 34m UE: <.01 FAI: 1.000													
Comment: Compound thin-plate weir, 11m wide. Theoretical rating. Catchment contains swallow holes; significant losses between 27048 and a nearby u/s monitoring site (Forge Valley). High flows are diverted down the Sea Cut (27033) resulting in sudden drop in flow. # Jurassic s'st, f'st and shales. Predominantly rural catchment with substantial forest cover.		1996	751	88	117	146	0.47	3.3	19/12	0.00	16/09	1.1	0.41	
		1997	779	91	98	123	0.40	3.4	30/06	0.00	10/06	0.9	0.25	0.01
		1998	1022	120	245	306	0.98	3.9	02/06	0.14	26/09	1.7	1.02	0.17
		1999	1012	119	219	274	0.88	5.2	06/03	0.07	04/08	1.5	0.92	0.12
		2000	1243	146	176	220	0.71	3.5	04/06	0.19	18/08	1.2	0.63	0.27
027073	**Brompton Beck at Snainton Ings** C.A: 12.9 km^2	**81..95**	**713**		**579**		**0.24**	**1.2**	**08/01 1982**	**0.00**	**08/10 1990**	**0.5**	**0.17**	**0.02**
M.A: EA	Local No: 8912760 Sens.: 43.2													
F.A.R: GN	Level: 9m UE: FAI:													
Comment: Crump Weir. Full range and modular. Stable and sensibly natural regime. Topographical and gw divides may differ considerably. # A mainly permeable (Corallion) catchment. Rural.		1996	649	91	397	69	0.16	0.6	23/12	0.01	08/11	0.4	0.12	0.02
		1997	684	96	388	67	0.16	0.4	30/12	0.03	10/11	0.3	0.13	0.05
		1998	873	122	802	139	0.33	0.9	14/04	0.10	25/09	0.6	0.30	0.12
		1999	849	119	740	128	0.30	1.3	10/03	0.10	03/08	0.5	0.21	0.11
		2000	1094	153	954	165	0.39	0.8	10/11	0.13	12/09	0.6	0.36	0.16
027087	**Derwent at Low Marishes** C.A: 457.5 km^2	**89..95**	**672**		**205**		**2.98**	**16.2d**	**09/12 1990**	**0.40**	**27/07 1989**	**6.4**	**2.35**	**0.86**
M.A: EA	Local No: Sens.:													
F.A.R: PGI	Level: 15m UE: FAI:													
Comment: Electromagnetic (overhead coil) gauging station in formalised reach. Cableway. Station installed between old bridge abutments, railway embankments ensure all flows pass through measuring section. Calibration incomplete (early problems with tapping pipe siltation). Flow regime is sensibly natural apart from the flood diversion to the Sea Cut (027033) and the effect of spray irrigation. # The catchment drains the eastern part of the North York Moors (mostly permeable Oolite and Corallian formations). Largely rural with considerable moorland and wooded headwaters.		1996	643	96	191	93	2.77	14.8d	20/12	0.75	06/08	5.6	2.24	0.86
		1997	678	101	168	82	2.44	8.9d	20/12	0.91	11/06	4.2	1.83	1.15
		1998	871	130	352	172	5.10	16.2d	09/01	1.81	23/08	8.9	4.54	1.91
		1999	854	127	314	153	4.56	12.3d	09/03	1.52	05/08	8.1	4.03	1.67
		2000	1078	160	413	201	5.97	27.5d	09/11	2.34	10/09	10.2	4.56	2.59
027041	**Derwent at Buttercrambe** C.A: 1586.0 km^2	**73..95**	**766**		**317**		**15.93**	**124.8**	**05/01 1982**	**2.70**	**23/08 1976**	**32.9**	**11.57**	**3.91**
M.A: EA	Local No: 8912807 Sens.: 6.1 S/full: 74.8m^3s^{-1}													
F.A.R: RPI	Level: 10m UE: <.01 FAI: 0.995													
Comment: Crump weir, 20m wide; high flow rating derived from limited number of gaugings. Structure drowned and bypassed in March 1999 \& Nov 2000 floods. Non-modular flow at approx 55 m^3s^{-1}. Pre-Oct 1973 data (monthly only) of poorer quality; derives from 27015 (C.A.: 1634.3 km^2). Peak flows from the headwaters u/s of Forge Valley (8% catchment) are diverted down the Sea Cut (27033). Minor net impact of artificial influences (spray irrigation is appreciable). # Mixed geology of clays, shales and limestone. Rural catchment draining the North York Moors.		1996	637	83	217	68	10.86	87.0d	14/02	3.11	14/10	23.3	7.78	3.34
		1997	725	95	213	67	10.73	57.7d	20/12	4.16	05/10	21.4	7.13	4.43
		1998	890	116	399	126	20.08	108.2	12/04	5.93	27/09	41.5	15.62	6.48
		1999	868	113	392	124	19.70	**158.3**	**09/03**	5.29	15/09	36.3	14.80	5.63
		2000	1065	139	524	165	26.27	**172.1**	**09/11**	6.71	26/08	53.1	15.74	7.28
027044	**Blackfoss Beck at Sandhills Bridge** C.A: 47.0 km^2	**74..95**	**653**		**258**		**0.38**	**15.9**	**21/01 1985**	**>0.00**	**20/08 1976**	**0.8**	**0.15**	**0.03**
M.A: EA	Local No: 8912835 Sens.: 29.3													
F.A.R: EI	Level: 6m UE: FAI:													
Comment: Flat V weir, 4m wide. Theoretical rating. Low flow gauge, subject to drowning. High flows should be treated with caution. In summer 1984 the weir crest was lowered for land drainage requirements and its modular limit was reduced. Significant agricultural abstractions in summer. # Low-lying, rural catchment draining from W of Yorkshire Wolds.		1996	554	85	186	72	0.28	14.9	20/12	0.03	22/07	0.4	0.10	0.04
		1997	645	99	191	74	0.28	12.0	19/12	0.05	08/06	0.5	0.14	0.06
		1998	705	108	299	116	0.45	13.5	11/04	0.06	19/08	0.9	0.24	0.07
		1999	746	114	342	133	0.51	10.4	07/03	0.04	03/08	1.0	0.26	0.06
		2000	871	133	613	238	0.91	**18.3**	**06/11**	0.06	13/09	1.5	0.28	0.07
027076	**Bielby Beck at Thornton Lock** C.A: 103.1 km^2	**83..95**	**670**		**109**		**0.36**	**9.6**	**09/12 1983**	**0.01**	**01/09 1991**	**0.8**	**0.18**	**0.02**
M.A: EA	Local No: 8912830 Sens.: 40.9													
F.A.R: I	Level: 6m UE: FAI:													
Comment: Flat V weir, 1:10 cross-slope. Drowns at high flows (backing-up from the Derwent). Complementary to Pocklington Canal (27861) - summation of flows plus u/s canal abstraction required for total catchment response. Significant spray irrigation in spring/summer. Anomolous flows can be caused by British Waterway interventions at the sluice near the weir. # Headwaters below the scarp of the Yorkshire Wolds but catchment is low-lying. Predominantly rural.		1996	601	90	92	84	0.30	*10.6*	*20/12*	0.04	03/08	0.6	0.17	0.05
		1997	694	104	126	116	0.41	*9.7*	*01/07*	0.11	04/06	0.7	0.29	0.14
		1998	755	113	146	134	0.48	6.0	18/01	0.03	18/08	1.0	0.37	0.04
		1999	819	122	179	164	0.58	5.0d	26/09	0.03	03/08	1.2	0.48	0.04
		2000	918	137	241	221	0.79	**11.7**	**07/11**	0.04	12/09	1.5	0.48	0.05
027035	**Aire at Kildwick Bridge** C.A: 282.3 km^2	**68..95**	**1150**		**685**		**6.13**	**110.9**	**01/02 1995**	**0.18**	**23/08 1976**	**15.6**	**2.93**	**0.54**
M.A: EA	Local No: 8911503 Sens.: 15.8 B/full: 77.0m^3s^{-1}													
F.A.R: S	Level: 87m UE: <.01 FAI: 0.980													
Comment: Velocity-area station rated by c/m cableway 150m d/s. The bridge sills provide the low flow control. Washland storage, minor reservoirs, and the Leeds-Liverpool Canal can influence the flow pattern but small overall impact; minor net export. # Geology: mainly Carboniferous Limestone with some Millstone Grit series. Rural catchment draining part of the eastern Pennines.		1996	930	81	475	69	4.24	53.8	05/11	0.59	19/08	10.2	1.85	0.69
		1997	1026	89	595	87	5.33	58.2	25/12	0.58	12/08	12.7	2.18	0.76
		1998	1331	116	959	140	8.58	68.5	06/03	1.04	26/05	20.1	4.60	1.40
		1999	1275	111	879	128	7.87	73.7	06/12	0.61	18/09	18.3	3.73	0.83
		2000	1616	141	1209	176	10.79	**163.3**	**30/10**	0.73	25/07	27.8	5.73	0.93
027084	**Eastburn Beck at Crosshills** C.A: 43.3 km^2	**88..95**	**1074**		**613**		**0.84**	**50.4**	**19/12 1993**	**0.03**	**22/08 1995**	**2.1**	**0.31**	**0.06**
M.A: EA	Local No: Sens.:													
F.A.R: N	Level: m UE: FAI:													
Comment: Flat V weir, 1:10 cross-slope. All flows contained. Heavy sediment/gravel loads. Natural regime. Backing-up from the Aire causes drowning at high flows; d/s levels monitored but processed flows assume modularity. # Steep Pennine catchment, developed on Millstone Grit, draining to the Aire. Largely moorland with rough grazing the principal land use.		1996	912	85	433	71	0.59	30.0	05/11	0.05	19/08	1.4	0.26	0.06
		1997	915	85	482	79	0.66	25.7	25/12	0.05	20/08	1.7	0.26	0.07
		1998	1232	115	765	125	1.05	23.0	06/03	0.14	24/05	2.6	0.54	0.16
		1999	1255	117	783	128	1.08	33.7	02/12	0.06	13/09	2.4	0.49	0.08
		2000	1513	141	1015	166	1.39	**50.7**	**03/06**	0.08	24/08	3.4	0.65	0.10
027072	**Worth at Keighley** C.A: 71.7 km^2	**80..95**	**1234**		**592**		**1.35**	**27.9**	**05/01 1992**	**0.14**	**19/08 1984**	**3.1**	**0.76**	**0.26**
M.A: EA	Local No: 8911403 Sens.: 13.1													
F.A.R: SR	Level: 97m UE: FAI:													
Comment: Limited range Flat V weir, 1:10 cross-slope. At higher flows the structure is substantially bypassed. A largely natural regime but reservoir storage (and compensation flows of 14 Mid) and mill operation can be influential. # Steep Millstone Grit catchment draining peat moorland.		1996	1038	84	372	63	0.84	10.5	05/11	0.19	17/08	1.8	0.51	0.21
		1997	1040	84	418	71	0.95	12.3	25/12	0.27	19/08	2.1	0.50	0.30
		1998	1416	115	711	120	1.62	17.5	06/03	0.39	27/09	3.7	0.98	0.45
		1999	1441	117	677	114	1.54	23.8	07/05	0.28	31/07	3.5	0.85	0.32
		2000	1642	133	833	141	1.89	**33.2**	**01/11**	0.34	14/09	4.1	1.15	0.37
027077	**Bradford Beck at Shipley** C.A: 58.0 km^2	**83..95**	**915**		**356**		**0.65**	**41.2**	**08/09 1993**	**0.12**	**27/08 1984**	**1.4**	**0.37**	**0.16**
M.A: EA	Local No: 8911650 Sens.:													
F.A.R: I	Level: m UE: FAI:													
Comment: Flat V weir, 1:10 cross-slope in a relatively steep channel. Processed flows assume modularity. Some import of water (storm overflows which make for an even flashier regime) otherwise net effect of abstractions and discharges is small. # A heavily urbanised catchment.		1996	864	94	259	73	0.48	17.6	11/02	0.14	19/08	1.0	0.30	0.15
		1997	822	90	254	71	0.47	35.2	11/06	0.14	03/10	1.0	0.29	0.17
		1998	1116	122	394	111	0.72	20.9	08/01	0.17	18/08	1.5	0.45	0.20
		1999	1056	115	344	97	0.63	27.5	07/05	0.13	09/09	1.4	0.39	0.14
		2000	1236	135	450	126	0.83	37.7	03/06	0.16	08/09	1.7	0.55	0.18

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
027028 **Aire at Armley** C.A: 691.5 km^2	**61..95**	**1061**		**685**		**15.01**	**212.4**	**17/10 1967**	**1.50**	**04/07 1965**	**34.0**	**9.16**	**3.29**
M.A: EA Local No: 8911707 Sens.: 9.4													
F.A.R: SPEI Level: 26m UE: .07 FAI: 0.963													
Comment: Broad-crested weir, 20m wide, rated for all flows by cableway at the section. Pre-1971 data are less reliable. Station prone to heavy weedgrowth. # Geology comprises predominantly Carboniferous L'st in the headwaters down to Skipton, and Millstone Grit and Lower Coal Measures. Rural headwaters, considerable urban and industrial development d/s. Catchment includes station 27035.	1996	894	84	479	70	10.46	110.6	20/12	2.64	23/06	21.4	6.56	3.39
	1997	925	87	526	77	11.54	104.4	25/12	3.11	10/08	26.1	6.72	3.47
	1998	1216	115	796	116	17.46	140.9	06/03	3.78	25/05	37.8	11.04	4.53
	1999	1170	110	755	110	16.56	143.1	06/12	2.99	08/08	37.5	9.51	3.23
	2000	1439	136	1005	147	21.98	252.8	31/10	3.11	24/07	43.3	13.35	3.77
027080 **Aire at Lemonroyd** C.A: 865.0 km^2	**85..95**	**955**		**635**		**17.41**	**209.5**	**13/09 1993**	**3.79**	**09/10 1989**	**38.8**	**10.70**	**4.78**
M.A: EA Local No: 8911702 Sens.:													
F.A.R: PEI Level: m UE: FAI:													
Comment: Crump weir approx. 27m wide which superseded - in 1993 - Fleet Weir (30m Crump with fish pass) a short distance u/s - data from 1985 (flows incorporated in Lemonroyd series on NRFA). Complex pattern of water utilisation in lower catchment - significant disturbance to runoff regime: Leeds STW u/s; Aire and Calder Navigation canal bypasses the station. # Largely impervious catchment developed mainly on Carboniferous L'st (headwaters), Millstone Grit and Lower Coal Measures. Rough grazing in Pennine headwaters contrasts with very considerable urban and industrial development below Skipton.	1996	847	89	485	76	13.25	152.6	19/12	4.37	04/08	25.1	8.88	5.07
	1997	874	92	540	85	14.81	111.9	25/12	4.88	20/08	31.7	9.55	5.44
	1998	1138	119	805	127	22.08	157.4	06/03	6.15	27/09	47.4	14.68	7.00
	1999	1086	114	733	115	20.12	142.1	11/12	4.88	14/09	45.3	12.66	5.35
	2000	1347	141	965	152	26.39	231.6	31/10	5.27	22/07	54.9	17.24	5.89
027081 **Outton Beck at Farrer Lane** C.A: 25.1 km^2	**86..95**	**631**		**171**		**0.14**	**2.9**	**07/04 1987**	**0.01**	**07/09 1991**	**0.3**	**0.08**	**0.02**
M.A: EA Local No: Sens.:													
F.A.R: Level: m UE: FAI:													
Comment: Flat V weir - 1:10 cross-slope. Substantial modular range. Stormwater drainage in part of the catchment. # A small impervious (Coal Mesures) catchment with significant urban/suburban development. Catchment is traversed by both the M1 and M62.	1996	588	93	110	64	0.09	2.3	19/12	0.01	27/07	0.2	0.05	0.02
	1997	632	100	129	75	0.10	2.0	31/08	0.03	09/06	0.2	0.07	0.03
	1998	782	124	256	150	0.20	3.3	03/03	0.03	20/09	0.4	0.13	0.04
	1999	685	109	185	108	0.15	1.3	06/03	0.03	10/09	0.3	0.10	0.04
	2000	900	143	321	188	0.25	4.3	06/11	0.04	13/09	0.5	0.14	0.05
027068 **Ryburn at Ripponden** C.A: 33.0 km^2	**81..95**	**1388**		**547**		**0.57**	**17.7**	**31/01 1995**	**0.10**	**02/09 1984**	**1.2**	**0.32**	**0.20**
M.A: EA Local No: 8911240 Sens.: 25.7													
F.A.R: SP Level: 97m UE: FAI:													
Comment: Flat V weir, 1:20 cross-slope. Sited close to the confluence of two reservoired catchments - of limited hydrological value. Flow is compensation releases from the reservoir.	1996	1161	84	283	52	0.30	6.7	03/12	0.10	10/03	0.5	0.17	0.13
	1997	1171	84	468	86	0.49	6.9	19/02	0.19	19/06	0.9	0.29	0.21
	1998	1676	121	799	146	0.84	19.4	06/03	0.24	25/02	1.7	0.41	0.28
	1999	1608	116	763	139	0.80	11.6	02/03	0.23	04/07	1.8	0.40	0.24
	2000	1829	132	947	173	0.99	16.4	06/11	0.24	15/05	2.4	0.50	0.27
027029 **Calder at Elland** C.A: 341.9 km^2	**61..95**	**1280**		**786**		**8.52**	**411.3**	**27/10 1980**	**1.11**	**26/08 1984**	**18.5**	**4.88**	**2.06**
M.A: EA Local No: 8911203 Sens.: 3.9													
F.A.R: SPI Level: 58m UE: .03 FAI: 0.930													
Comment: Broad crested masonry weir 53m wide (Crump profile notch for low flow measurement) - c/m rated, cableway 200m d/s. Water level recorder resited nearer the river in 1980. Weir breached in 1982 necessitating a new rating curve. Flows reprocessed, resulting in a substantial increase in high flows and a decrease in low flows. Numerous reservoirs within the catchment. # Valley bottoms of lower catchment are heavily urbanised and industrialised. Valleys rise steeply to moorland predominantly covered by peat. Geology comprises Upper Carboniferous Millstone Grit Series.	1996	1072	84	495	63	5.35	88.0	05/11	1.80	23/06	10.8	3.05	1.97
	1997	1103	86	560	71	6.07	70.3	19/02	1.89	12/08	13.1	3.22	2.20
	1998	1483	116	943	120	10.22	153.2	06/03	2.74	19/08	21.5	5.95	2.94
	1999	1462	114	873	111	9.47	110.9	06/12	1.75	04/09	21.9	5.36	2.04
	2000	1672	131	1100	140	11.89	227.2	03/06	2.02	24/08	27.0	7.20	2.23
027061 **Colne at Longroyd Bridge** C.A: 72.3 km^2	**78..95**	**1347**		**622**		**1.43**	**38.9**	**21/03 1981**	**0.11**	**25/08 1984**	**3.2**	**0.74**	**0.29**
M.A: EA Local No: 8911104 Sens.: 12.3 S/full: 22.1m^3s^{-1}													
F.A.R: SPGI Level: 73m UE: .06 FAI: 0.914													
Comment: Limited range Flat V weir, 12m wide. Theoretical rating. Reservoirs in catchment. # Geology: Millstone Grit. Moorland headwaters with urban and industrial development in the lower catchment.	1996	1146	85	361	58	0.83	26.1	05/11	0.17	19/08	1.6	0.41	0.21
	1997	1129	84	447	72	1.03	16.7	19/02	0.37	18/08	2.1	0.58	0.40
	1998	1528	113	754	121	1.73	44.2	06/03	0.37	20/09	3.5	0.84	0.45
	1999	1473	109	768	123	1.76	29.0	06/12	0.34	04/09	3.8	0.91	0.41
	2000	1690	125	880	141	2.01	37.3	06/11	0.39	30/08	5.0	1.06	0.42
027065 **Holme at Queens Mill** C.A: 97.4 km^2	**79..95**	**1276**		**695**		**2.15**	**62.1**	**08/12 1993**	**0.27**	**26/08 1984**	**4.7**	**1.17**	**0.44**
M.A: EA Local No: 8911003 Sens.: 9.7 S/full: 6.5m^3s^{-1}													
F.A.R: SRI Level: 68m UE: FAI:													
Comment: Flat V weir, 11m wide, 1:10 cross-slope. Full range. Reservoirs in headwaters - compensation releases from Holme Bridge group affects flow pattern. Net export of water from the catchment. # Predominantly Millstone Grit. Moorland headwaters; urban and industrial development in the lower catchment.	1996	1054	83	444	64	1.37	20.6	20/12	0.27	20/09	2.9	0.71	0.33
	1997	1075	84	520	75	1.61	24.9	19/02	0.48	22/08	3.3	0.99	0.52
	1998	1464	115	867	125	2.68	59.9	06/03	0.52	28/09	5.4	1.40	0.62
	1999	1453	114	823	118	2.54	38.0	03/12	0.46	14/09	6.3	1.48	0.51
	2000	1644	129	1035	149	3.19	77.2	06/11	0.55	20/08	7.2	2.06	0.60
027031 **Colne at Colne Bridge** C.A: 245.0 km^2	**64..95**	**1158**		**564**		**4.38**	**272.1**	**16/10 1967**	**0.03**	**13/02 1992**	**9.7**	**2.30**	**0.58**
M.A: EA Local No: 8911102 Sens.: 7.9 S/full: 42.0m^3s^{-1}													
F.A.R: SPGI Level: 48m UE: .08 FAI: 0.957													
Comment: Curved broad-crested weir 52m wide with central Crump profile notch 3.8m wide for more accurate low flow measurement. Rated by current meter at a cableway 0.2km d/s. High flow rating under review (1997). Substantial artificial influences due to numerous reservoirs. Low flows in Feb 1992 due to a land slip event causing ponding u/s of station. Flows bypassed through nearby canal. # Mixed geology with Millstone Grit in the upper catchment and Coal Measures in the lower part. Catchment comprises moorland headwaters with heavily urbanised valleys.	1996	999	86	319	57	2.47	59.7	20/12	0.11	16/09	6.0	0.95	0.21
	1997	1005	87	383	68	2.97	56.7	19/02	0.48	19/08	7.4	1.53	0.61
	1998	1357	117	724	128	5.62	127.1	06/03	0.59	25/09	11.5	2.41	0.82
	1999	1327	115	687	122	5.34	90.4	03/12	0.59	04/09	13.6	2.52	0.68
	2000	1505	130	842	149	6.52	149.4	06/11	0.66	19/08	15.1	3.64	0.90
027074 **Spen Beck at Northorpe** C.A: 46.3 km^2	**82..95**	**789**		**551**		**0.81**	**20.3**	**09/12 1983**	**0.23**	**26/08 1984**	**1.5**	**0.54**	**0.32**
M.A: EA Local No: 8911385 Sens.: 20.2													
F.A.R: E Level: 41m UE: FAI:													
Comment: Crump Weir. D/s recorder, but processed flows assume modularity; backing-up from the Calder causes occasional drowning. Sewage effluent component evident on hydrograph but since beginning of 1999 artificial influences have been greatly reduced - closure of STWs and reduction of mine water discharges upstream; substantial consequent reduction in runoff and low flows. # A largely urban catchment developed mostly on Coal Measures.	1996	752	95	459	83	0.67	13.8	19/12	0.29	03/08	1.1	0.47	0.33
	1997	719	91	445	81	0.65	9.3	31/08	0.27	04/10	1.3	0.47	0.31
	1998	926	117	602	109	0.88	16.2	03/03	0.31	16/08	1.7	0.56	0.33
	1999	892	113	340	62	0.50	9.6	03/12	0.08	04/09	1.2	0.30	0.09
	2000	1025	130	392	71	0.57	16.9	06/11	0.07	08/09	1.3	0.29	0.10
027079 **Calder at Methley** C.A: 930.0 km^2	**88..95**	**1004**		**659**		**19.42**	**200.8d**	**28/01 1995**	**4.47**	**23/09 1995**	**41.4**	**11.57**	**5.73**
M.A: EA Local No: 1301 Sens.:													
F.A.R: SR Level: m UE: FAI:													
Comment: Multi-path ultrasonic gauging station - signal attenuation problems at high flows/high suspended solids. Catchment area is provisional. # Impermeable - mainly Millstone Grit catchment draining moorland headwaters with extensive peat cover.	1996	899	90	489	74	14.39	134.6d	19/12	4.44	26/07	25.7	9.56	5.35
	1997	908	90	537	81	15.84	91.9d	20/02	5.14	01/11	32.3	10.84	5.97
	1998	1214	121	877	133	25.85	169.2d	06/03	7.24	19/08	52.2	17.18	8.39
	1999	1175	117	808	123	23.84	136.7d	03/12	5.58	05/09	52.7	15.21	6.21
	2000	1358	135	1015	154	29.86	251.0d	06/11	5.70	20/08	59.4	20.78	7.10

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1998	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
027003	**Aire at Beal Weir** C.A: 1932.1 km^2	**58..95**	**976**		**583**		**35.72**	**339.6**	**01/04**	**3.45**	**18/10**	**76.0**	**23.02**	**8.90**
M.A: EA	Local No: 8911806 Sens.: 6.0 B/full: 280.0m^3s^{-1}								**1969**		**1959**			
F.A.R: SPEI	Level: 6m UE: FAI:													
Comment: Broad-crested masonry weir, 33m wide. Gauged calibration - original cableway 4.5km u/s (led to limited low flow accuracy); improved performance using new site (1km u/s) from June 1993 (combined record). Very high flows inundate extensive N bank washlands. By-passing via the Aire and Calder canal (flows now measured). Catchment is heavily reservoired and industrialised. Complex water utilisation; net import. # Mixed geology: Carb. L'st, Millstone Grit and Coal Measures in the upper catchment; Magnesium L'st and Marl and Triassic S'st at the lower end.		1996	852	87	403	69	24.63	282.3	20/12	7.06	18/08	46.5	16.09	7.77
		1997	871	89	431	74	26.43	199.4	26/12	7.77	11/08	58.8	16.77	8.91
		1998	1147	118	689	118	42.24	290.2	07/03	9.10	27/09	93.5	25.70	11.05
		1999	1098	113	617	106	37.81	277.4	16/01	6.91	15/09	91.2	21.63	8.04
		2000	1316	135	810	139	49.51	294.8	06/11	8.18	25/08	111.2	29.83	9.45
027040	**Doe Lea at Staveley** C.A: 67.9 km^2	**70..95**	**709**		**271**		**0.58**	**13.1**	**16/07**	**0.02**	**27/08**	**1.2**	**0.34**	**0.13**
M.A: EA	Local No: 8910103 Sens.: 14.2 S/full: 9.8m^3s^{-1}								**1973**		**1976**			
F.A.R: GEI	Level: 48m UE: .06 FAI: 0.972													
Comment: Rectangular flume, throat width: 3m. Theoretical rating used but then structure affected by mining subsidence; the flume tilted. Subsequently, c/m rating developed and applied from 1996;1982-95 data reprocessed (all flows reduced) but 1970-81 awaits reworking. Artificial influences include a net import of water including mine drainage. # Mixed geology comprising Coal Measures, Permian Marls and Magnesium L'st. Predominantly rural catchment and urbanised lower reaches.		1996	604	85	173	64	0.37	8.8	19/12	0.13	16/10	0.7	0.23	0.14
		1997	682	96	194	72	0.42	4.2	24/02	0.14	07/08	0.8	0.27	0.16
		1998	762	107	309	114	0.67	7.3	27/10	0.15	09/08	1.3	0.42	0.16
		1999	757	107	271	100	0.58	6.3	09/03	0.12	26/07	1.3	0.38	0.14
		2000	920	130	354	131	0.76	11.9	06/11	0.13	04/09	1.6	0.42	0.15
027052	**Whitting at Sheepbridge** C.A: 50.2 km^2	**76..95**	**836**		**511**		**0.81**	**49.2**	**22/06**	**0.11**	**04/09**	**1.9**	**0.44**	**0.17**
M.A: EA	Local No: 8910220 Sens.: 25.5								**1982**		**1976**			
F.A.R: SE	Level: 70m UE: .09 FAI: 0.995													
Comment: Crump weir, 5.98m wide. Theoretical rating. # Geology: Coal Measures: s'sts and shales. Industrialised catchment with moorland headwaters.		1996	699	84	333	65	0.53	12.7	19/12	0.14	12/10	1.1	0.28	0.15
		1997	817	98	423	83	0.67	20.5	31/08	0.19	29/09	1.5	0.38	0.20
		1998	928	111	606	119	0.96	31.7	27/10	0.19	23/09	2.1	0.49	0.22
		1999	903	108	498	97	0.79	11.2	02/03	0.19	05/09	1.8	0.47	0.20
		2000	1100	132	709	139	1.13	25.5	06/11	0.19	12/09	2.6	0.62	0.22
027026	**Rother at Whittington** C.A: 165.0 km^2	**63..95**	**806**		**369**		**1.93**	**79.9**	**15/07**	**0.13**	**27/07**	**4.3**	**1.01**	**0.31**
M.A: EA	Local No: 8910203 Sens.: 13.5 B/full: 180.0m^3s^{-1}								**1973**		**1976**			
F.A.R: SPGI	Level: 58m UE: .11 FAI: 0.975													
Comment: Shallow V weir replaced in Nov 1979 by velocity-area station a short distance d/s. Rated using cableway 50m u/s. Flows bypassing station via Chesterfield Canal have been measured at Wheeldon mill lock since Oct 1963 and are stored separately. Flows from Nov 1979 reprocessed in 1996 (reduction in low and highest flows). Runoff affected by reservoirs in Rother valley and imports/ exports of water. # Geology: mainly Coal Measures with underlying Millstone Grit outcropping in SW corner. R. Rother follows a synclinal axis. Rural headwaters: R. Rother rises in eastern Peak District, Chesterfield is immediately u/s of station.		1996	679	84	255	69	1.33	30.7	19/12	0.24	27/09	2.9	0.69	0.27
		1997	784	97	305	83	1.60	33.8	31/08	0.31	05/10	3.4	0.85	0.37
		1998	898	111	442	120	2.31	43.9	27/10	0.33	12/08	4.9	1.10	0.39
		1999	870	108	378	102	1.98	23.9	24/12	0.33	29/07	4.8	1.07	0.37
		2000	1053	131	527	143	2.75	62.6	06/11	0.28	16/08	6.2	1.38	0.35
027025	**Rother at Woodhouse Mill** C.A: 352.2 km^2	**61..95**	**767**		**377**		**4.21**	**105.4**	**23/06**	**0.43**	**12/10**	**9.0**	**2.50**	**0.99**
M.A: EA	Local No: 8910304 Sens.: 8.2 B/full: 250.0m^3s^{-1}								**1982**		**1970**			
F.A.R: SRPGEI	Level: 29m UE: .10 FAI: 0.933													
Comment: Velocity-area station, 15m wide, with c/m cableway 35m d/s. The gauge is d/s of the washland storage scheme controlled by regulator gate on the channel to pond water at times of high flow. Subsidence due to mining necessitates re-rating. Sequences of identical low flows in the 1960s (but realistic). # Mixed geology: principally Coal Measures, some valley alluvium. Land use: moorland headwaters and urbanised valleys.		1996	643	84	233	62	2.59	58.6	20/12	0.63	17/09	5.0	1.55	0.72
		1997	732	95	275	73	3.07	42.6	31/08	0.88	03/10	6.2	1.84	1.00
		1998	833	109	409	108	4.57	71.3	27/10	0.82	26/09	9.3	2.36	0.92
		1999	805	105	350	93	3.91	37.5	24/12	0.79	30/07	8.8	2.36	0.90
		2000	988	129	486	129	5.41	**135.2**	**06/11**	1.30	12/09	10.8	2.91	1.39
027067	**Sheaf at Highfield Road** C.A: 49.1 km^2	**81..95**	**893**		**389**		**0.61**	**119.4**	**21/12**	**0.05**	**04/09**	**1.4**	**0.31**	**0.08**
M.A: EA	Local No: 8910402 Sens.: 20.5								**1991**		**1990**			
F.A.R:	Level: .54m UE: FAI:													
Comment: Flat V weir, 1:10 cross-slope. Structure drowns as a result of backing-up from the R. Don (culvert blockage may also be significant). Modular limit to be determined. No reservoirs in catchment. # Steep catchment developed on Carboniferous formations: Millstone Grit and Coal Measures. Very substantial urban development (Sheffield) below Pennine headwaters.		1996	762	85	296	76	0.46	19.9	19/12	0.06	19/08	1.0	0.24	0.07
		1997	863	97	338	87	0.53	48.7	31/08	0.10	05/10	1.2	0.30	0.13
		1998	1028	115	486	125	0.76	48.2	22/10	0.09	18/08	1.6	0.36	0.11
		1999	987	111	371	95	0.58	8.9	25/09	0.07	10/09	1.3	0.37	0.08
		2000	1164	130	572	147	0.89	37.0	06/11	0.07	17/08	1.9	0.52	0.11
027006	**Don at Hadfields Weir** C.A: 373.0 km^2	**65..95**	**1020**		**455**		**5.39**	**265.1**	**12/04**	**0.68**	**03/09**	**11.0**	**3.05**	**1.45**
M.A: EA	Local No: 8910605 Sens.: 22.2 B/full: 350.0m^3s^{-1}								**1970**		**1976**			
F.A.R: SPGEI	Level: 30m UE: .11 FAI: 0.891													
Comment: Broad-crested masonry weir, 45m wide, rated by a c/m from a cableway 100m d/s (destroyed in 1989). Flows from 1982 reprocessed in 2002. Substantial reduction in high flows for this period, plus some reduction in low flows. The upper catchment is considerably reservoired and the impact on the flow regime is substantial - significant net loss of water from the catchment. # Mixed geology. Moorland headwaters contrast with the heavily urbanised lower catchment (now less industrial).		1996	887	87	256	56	3.02	64.9	20/12	0.76	17/09	6.1	1.74	0.81
		1997	937	92	332	73	3.93	106.7	31/08	1.52	04/10	7.2	2.68	1.65
		1998	1189	117	567	125	6.71	96.9	22/10	1.61	26/09	14.8	3.51	1.83
		1999	1129	111	477	105	5.64	48.4	07/03	1.33	15/09	12.4	3.27	1.69
		2000	1347	132	683	150	8.06	160.3	06/11	1.59	13/09	17.8	4.61	1.75
027066	**Blackburn Brook at Ashlowes** C.A: 42.8 km^2	**81..95**	**765**		**208**		**0.28**	**41.1**	**22/06**	**>0.00**	**01/10**	**0.7**	**0.12**	**0.02**
M.A: EA	Local No: 8910660 Sens.: 53.8								**1982**		**1985**			
F.A.R:	Level: 33m UE: FAI:													
Comment: Flat V weir. All flows contained but flow record suspect - weir subject to drowning as a result of backing-up from the Don (flows assume modularity; overestimation can be considerable). Urban stormwater drainage in lower part of the catchment. # Catchment developed largely on Carboniferous formations (Coal Measures). Large urban fraction (N Sheffield).		1996	671	88	156	75	0.21	8.3	19/12	0.01	18/09	0.4	0.10	0.02
		1997	701	92	172	83	0.23	13.5	31/08	0.04	24/09	0.6	0.12	0.05
		1998	873	114	274	132	0.37	9.6	22/10	0.04	23/09	0.9	0.17	0.05
		1999	827	108	257	124	0.35	5.9	02/07	0.02	21/08	0.8	0.15	0.04
		2000	996	130	366	176	0.50	31.1	06/11	0.04	13/09	1.1	0.24	0.05
027023	**Dearne at Barnsley Weir** C.A: 118.9 km^2	**60..95**	**776**		**369**		**1.39**	**68.9**	**13/04**	**0.08**	**03/08**	**2.9**	**0.72**	**0.23**
M.A: EA	Local No: 8910806 Sens.: 13.5								**1970**		**1990**			
F.A.R: GI	Level: 43m UE: .06 FAI: 0.964													
Comment: Compound broad-crested weir, 12m wide, rated by model tests. Some abstractions and gain of drainage water pumped from coal mines. # Mixed geology of Upper Carboniferous. Predominantly rural catchment.		1996	694	89	267	72	1.00	33.6	20/12	0.17	23/06	1.9	0.59	0.25
		1997	713	92	276	75	1.04	15.8	18/12	0.20	01/11	2.2	0.64	0.34
		1998	959	124	511	138	1.93	37.5	09/04	0.40	20/09	4.2	1.04	0.46
		1999	879	113	409	111	1.54	20.9	17/04	0.15	18/09	3.3	0.86	0.35
		2000	1055	136	575	156	2.16	48.9	06/11	0.35	13/09	4.9	1.19	0.42
027030	**Dearne at Adwick** C.A: 310.8 km^2	**63..95**	**709**		**343**		**3.38**	**66.3**	**29/12**	**0.51**	**18/08**	**7.0**	**2.13**	**0.95**
M.A: EA	Local No: 8910803 Sens.: 7.4 B/full: 45.0m^3s^{-1}								**1978**		**1976**			
F.A.R: PGEI	Level: 13m UE: .10 FAI: 0.969													
Comment: Crump profile weir 5.5m wide with broad-crested flanking weirs. Flows greater than the capacity of the Crump profile weir rated by cableway. Post-1975 flows reprocessed in 1996: low flows reduced, high flows increased. The flow regime is substantially affected by industrial water use and sewage effluent augmentation (appreciable net import of water). # Geology: primarily Coal Measures. Land use: urban in valleys, moorland pasture in headwaters.		1996	614	87	227	66	2.23	55.5	20/12	0.58	27/07	4.0	1.38	0.66
		1997	638	90	241	70	2.37	27.3	31/08	0.86	11/08	4.9	1.62	0.97
		1998	832	117	422	123	4.16	48.7	09/04	0.98	21/09	8.8	2.43	1.12
		1999	772	109	355	103	3.50	44.2	17/04	0.78	14/09	6.9	2.04	0.98
		2000	937	132	505	147	4.96	**106.3**	**07/11**	0.97	13/09	10.8	2.60	1.09

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
027021	**Don at Doncaster** C.A: 1256.2 km^2	**59..95**	*802*		**406**		**16.18**	**219.6**	**23/06 1982**	**2.62**	**27/09 1959**	**34.8**	**10.25**	**4.96**
M.A: EA	Local No: 8910908 Sens.: 4.4													
F.A.R: SPEI	Level: 4m UE: .12 FAI: 0.931													
Comment: Velocity-area station, 24m wide, with cableway. Recalibrated in late 1970s following removal of rubble weir (low flow control). By-passing via the Sheffield and South Yorks navigation - flow now measured at Long Sandall Lock. Post-1977 flows reprocessed in 1996 (increased flows >150 m^3s^{-1}). Numerous artificial influences e.g. effect of the Don Valley reservoirs and imports of water for the urban areas. # Mixed geology: Millstone Grit (headwaters), Coal Measures, Magnesian L'st and Trias s'sts. Moorland headwaters, urbanised valleys.		1996	699	87	276	68	10.95	199.4	20/12	3.07	19/08	20.4	7.21	3.63
		1997	753	94	314	77	12.49	124.3	31/08	4.51	29/10	24.3	8.43	5.21
		1998	928	116	503	124	20.03	180.5	02/06	4.17	29/09	42.4	11.10	5.44
		1999	881	110	431	106	17.17	135.0	07/03	3.98	14/09	37.7	10.06	5.13
		2000	1060	132	614	151	24.38	267.9	07/11	5.06	18/08	55.3	13.56	5.56
027064	**Went at Walden Stubbs** C.A: 83.7 km^2	**79..95**	**622**		**215**		**0.57**	**21.7**	**01/06 1983**	**0.10**	**27/06 1992**	**1.1**	**0.35**	**0.17**
M.A: EA	Local No: 8910920 Sens.: 14.7 S/full: 11.3m^3s^{-1}													
F.A.R: EI	Level: 6m UE: FAI:													
Comment: Flat V weir, 7m wide, 1:10 cross-slope. All but highest flows contained. Weir can become non-modular. EA hold naturalised flows for 1984-95. Pumped minewater discharge significant prior to 1994 (now ceased). # Geology comprises shales, s'sts and f'sts. Rural catchment.		1996	506	81	101	47	0.27	9.1	20/12	0.11	20/08	0.4	0.20	0.12
		1997	539	87	100	47	0.27	2.9	18/12	0.13	03/06	0.4	0.21	0.14
		1998	701	113	233	108	0.62	6.4	11/04	0.18	17/09	1.2	0.40	0.20
		1999	636	102	185	86	0.49	5.2	07/03	0.16	03/08	0.9	0.35	0.18
		2000	833	134	341	159	0.90	36.6	07/11	0.18	12/08	1.8	0.42	0.21
027085	**Cod Beck at Dalton Bridge** C.A: 209.3 km^2	**89..95**	**640**		**196**		**1.30**	**21.7d**	**21/02 1991**	**0.07**	**03/09 1991**	**3.3**	**0.62**	**0.15**
M.A: EA	Local No: Sens.:													
F.A.R:	Level: m UE: FAI:													
Comment: Electromagnetic gauging station. Calibration incomplete. Backing-up from the Swale. No cableway. Sensibly a natural regime but spray irrigation can have an appreciable effect on summer flows. # A linear, N-S trending, catchment draining largely Lower Lias formations in the Vale of York (but baseflow from the Corallian of the Hambleton Hills also important). Apart from Thirsk, a very rural catchment.		1996	594	93	144	73	0.96	22.5d	12/02	0.10	17/09	2.1	0.46	0.14
		1997	656	103	138	70	0.92	9.7d	20/12	0.18	29/10	2.1	0.50	0.20
		1998	845	132	305	156	2.03	12.1d	11/04	0.29	20/09	4.5	1.26	0.36
		1999	789	123	269	137	1.78	12.8d	07/03	0.27	03/08	3.8	1.08	0.32
		2000	992	155	405	207	2.68	23.8d	13/04	0.30	25/08	6.7	1.11	0.34
027088	**Calder at Caldene Bridge** C.A: 171.7 km^2													
M.A: EA	Local No: Sens.:													
F.A.R: SR	Level: m UE: FAI:													
Comment: Multi-path ultrasonic gauging station (cross configuration). Full range but suspended solids cause signal attenuation in some floods. Further validation of data is needed (1997). Net export of water; Hebden Water Reservoirs provide supply to Halifax. Effluent discharge can affect flow pattern. Rochdale Canal (offtake is u/s) bypasses the station. # Steep, Pennine catchment with extensive moorland developed mostly on Millstone Grit. Heavily urbanised in parts of the lower valley.		1996	1135		474		2.57	27.2d	05/11	0.50	24/09	5.1	1.47	0.59
		1997	1174		513		2.79	20.9d	19/02	0.57	14/08	7.0	1.45	0.75
		1998	1582		899		4.89	50.4d	06/03	0.94	24/05	9.8	2.84	1.14
		1999	1545		826		4.50	38.0d	06/12	0.62	14/09	10.2	2.51	0.71
		2000	1796		1069		5.80	63.6d	30/10	0.77	20/07	13.5	3.47	0.91

Map 5a: MIDLANDS — TRENT



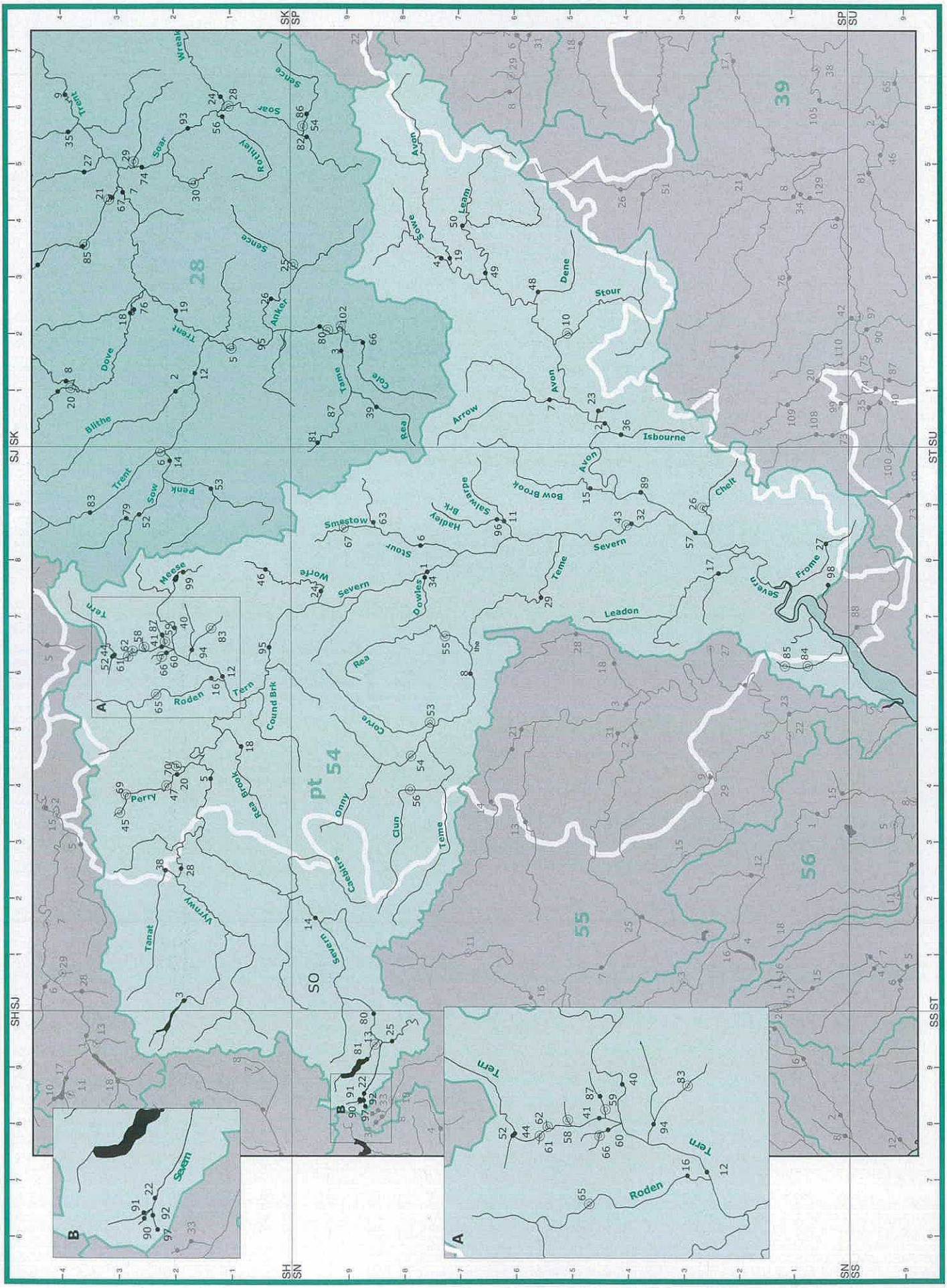
Area: 10,436 km^2

Average Rainfall (1961–90): 721 mm

Gauging Station Register

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
028040	Trent	Stoke on Trent	SJ 892467	53.2	C	1968–00	871	383	488	592	00	194	96	0.65	0.13	08/95	10.3	.45	1.4	0.13
028083	Trent	Darlaston	SJ 885355	195.2	US	1982..00	822	595	227	807	00	410	96	3.68	1.41	08/95		.64	6.7	1.48
028006 *	Trent	Great Haywood	SJ 994231	325.0	VA	1957–64	762	432	330	641	60	324	63	4.45	1.85	09/64	28.9	.70	7.8	2.32
028079	Meece Brook	Shallowford	SJ 874291	86.3	FVVA	1981–00	781	224	557	425	00	108	96	0.61	0.09	08/95		.62	1.2	0.13
028052	Sow	Great Bridgford	SJ 883270	163.0	FVVA	1971–00	764	226	538	441	00	118	96	1.17	0.14	08/76	9.5	.65	2.2	0.34
028053	Penk	Penkridge	SJ 923144	272.0	FVVA	1976..00	725	271	454	472	00	138	96	2.34	0.35	08/76	26.6	.58	4.4	0.62
028014	Sow	Milford	SJ 975215	591.0	VA	1960..00	733	322	411	631	00	167	76	6.03	1.00	04/76	30.5	.66	11.6	1.44
028002	Blithe	Hamstall Ridware	SK 109192	163.0	FL	1937..84	789	238	551	430	51	82	76	1.23	0.28	09/76	26.2	.50	2.8	0.32
028012	Trent	Yoxall	SK 131177	1229.0	EMVA	1959..00	772	337	435	670	99	190	76	13.12	2.48	08/76	70.5	.70	24.5	4.84
028081	Tame	Bescot	SP 012958	169.0	US	1982..00	745	444	301	572	83	279	96	2.38	0.68	09/96		.66	4.0	0.91
028087 *	Tame	Perry Park	SP 061919	196.1	FL	1989–93	700	412	288	473	92	363	90	2.58	1.62	07/90		.72	3.9	1.41
028039	Rea	Calthorpe Park	SP 071847	74.0	C B	1967..00	804	343	461	462	00	216	96	0.81	0.21	09/96	29.8	.47	1.6	0.24
028003	Tame	Water Orton	SP 169915	408.0	C	1955..00	748	436	312	628	60	271	96	5.64	2.02	09/96	71.6	.62	10.0	2.45
028066	Cole	Coleshill	SP 183874	130.0	FVVA	1973–00	748	232	516	315	00	153	96	0.96	0.17	08/95	16.1	.44	2.0	0.20
028102 *	Blythe	Whitacre	SP 212911	194.3	EM	1987..96	701	205	496	297	89	115	91	1.26	0.12	08/95		.42	2.8	0.22
028004 *	Tame	Lea Marston	SP 206935	795.0	VA	1956..82	728	532	196	688	66	385	76	13.40	6.37	07/76	63.9	.69	23.0	6.87
028080	Tame	Lea Marston	SP 207937	799.0	C C	1957..00	735	542	193	705	00	383	76	13.74	6.37	07/76		.70	23.1	7.32
028025 *	Sence	Ratcliffe Culey	SP 321996	169.4	C	1966–84	675	282	393	366	80	106	76	1.51	0.11	08/76		.42	3.0	0.25
028026	Anker	Polesworth	SK 263034	368.0	C VA	1966..00	673	259	414	421	00	104	76	3.02	0.34	07/76	41.5	.50	6.2	0.67
028005 *	Tame	Elford	SK 173105	1475.0	VA	1955–84	698	410	288	535	60	279	64	19.19	5.91	07/84	120.3	.65	35.4	8.25
028019	Trent	Drakelow Park	SK 239204	3072.0	VA	1966..00	730	373	357	564	00	222	96	36.36	10.81	08/76	183.5	.66	65.9	14.55
028033	Dove	Hollinsclough	SK 063668	8.0	C C	1965..00	1424	1009	415	1399	81	646	75	0.26	0.02	08/76	3.8	.45	0.6	0.04
028046	Dove	Izaak Walton	SK 146509	83.0	FV	1969–00	1123	738	385	986	00	448	76	1.94	0.34	08/76	12.6	.79	3.6	0.54
028038 *	Manifold	Hulme End	SK 106595	46.0	VA	1969..82	1158	782	376	981	81	505	75	1.14	0.03	07/76	49.0	.30	2.8	0.09
028041	Hamps	Waterhouses	SK 082502	35.1	FV	1968–82	1080	645	435	851	81	381	75	0.72	0.02	08/76	26.9	.35	1.7	0.06
028031	Manifold	Ilam	SK 140507	148.5	C	1968–00	1091	746	345	1021	81	475	96	3.51	0.39	08/76	54.6	.54	7.6	0.59
028103	Henmore Brk	Carsington O/f	SK 242501	15.8	TP	1998–00	1125	78	1047	82	99	74	00	0.04	0.03	05/98		.85	0.0	0.03
028058	Henmore Brk	Ashbourne	SK 176463	42.0	FV	1974..00	901	354	547	502	81	194	96	0.47	0.03	08/76	16.2	.47	1.0	0.07
028008	Dove	Rocester Weir	SK 112397	399.0	VA	1953–00	1036	590	446	871	66	314	59	7.47	0.67	09/59	81.8	.62	15.8	1.68
028061	Churnet	Basford Bridge	SJ 983520	139.0	FVVA	1975–00	972	417	555	657	00	207	96	1.84	0.35	07/96	25.5	.47	4.1	0.42
028020 *	Churnet	Rocester	SK 103389	236.0	VA	1954..82	1003	485	518	717	81	282	76	3.63	0.54	09/59	41.0	.55	7.6	0.95
028018	Dove	Marston	SK 235288	883.2	FVVA	1961–00	948	499	449	702	00	274	96	13.98	1.87	08/76	128.1	.60	28.2	3.47
028076	Tutbury Millfleam	Rolleston	SK 243283	23.0	FV	1980..00	718	856		1438	00	411	97	0.62	0.10	08/95		.50	0.9	0.11
028007	Trent	Shardlow	SK 448299	4400.0	US	1957..00	780	375	405	579	60	212	96	52.26	10.46	09/59	261.3	.66	109.9	16.54
028075 *	Derwent	Slippery Stones	SK 169951	17.0	FV	1979–82	1692	1096	596	1302	81	1067	80	0.59	0.11	05/80		.38	1.5	0.09
028073 *	Ashop	Ashop diversion	SK 171896	42.0	VA	1976..84	1510	747	763	851	79	677	81	1.00	0.03	10/78		.42	2.4	0.13
028001	Derwent	Yorkshire Bridge	SK 198851	126.0	FL FL	1933–00	1382	527	855	1047	00	222	96	2.11	0.22	05/74		.47	4.8	0.48
028037 *	Derwent	Mytham Bridge	SK 205825	203.0	L	1978..96	1378	782	596	1036	81	558	93	5.03	0.85	07/92		.45	11.6	1.03
028070 *	Burbage Brk	Burbage	SK 259804	9.1	TP	1965..82	1023	589	434	794	79	426	76	0.17	0.02	08/76	4.3	.46	0.4	0.02
028043	Derwent	Chatsworth	SK 261683	335.0	VA	1968..00	1182	600	582	1012	00	309	76	6.37	0.93	08/84	64.5	.55	14.2	1.48
028023	Wye	Ashford	SK 182696	154.0	FVVA	1965..00	1185	652	533	989	00	352	71	3.19	0.35	08/76	16.3	.76	6.0	0.94
028011	Derwent	Matlock Bath	SK 296586	690.0	VA	1958..00	1117	582	535	972	00	341	64	12.73	1.61	09/59	102.3	.64	26.9	3.29
028117	Derwent	Whatstandwell	SK 331545	755.0	FVVA	1997–00	1249	680	569	885	00	443	97	16.28	4.77	08/99		.65	33.5	4.70
028048	Amber	Wingfield Park	SK 376520	139.0	FVVA	1971–00	799	314	485	447	00	156	76	1.39	0.21	08/76	16.8	.50	2.8	0.36
028055	Ecclesbourne	Duffield	SK 320447	50.4	FV	1971..00	870	405	465	593	00	209	76	0.65	0.05	08/76	12.9	.50	1.5	0.10
028085	Derwent	St. Marys Bridge	SK 355368	1054.0	US	1935..00	1009	521	488	755	54	274	96	17.40	3.65	08/76		.62	36.2	4.49
028010 *	Derwent	Longbridge Weir/ St.Mary's Bridge	SK 356363	1054.0	VA	1935..86	1001	529	472	754	66	288	76	17.69	3.65	08/76	140.9	.62	36.3	4.98
028021 *	Derwent	Draycott	SK 443327	1175.0	VA	1965..77	973	551	422	771	75	318	76	20.54	4.59	08/76	104.3	.69	34.8	5.43
028067	Derwent	Church Wilne	SK 438316	1177.5	FV	1973–00	1002	506	496	754	00	275	96	18.89	3.96	08/76	146.2	.65	39.8	5.01
028082	Soar	Littlethorpe	SP 542973	183.9	EM	1971–00	652	242	410	366	80	110	76	1.41	0.16	07/76	21.5	.49	3.2	0.28
028086	Sence	South Wigston	SP 588977	113.0	EM	1971..00	650	276	374	458	80	128	96	0.99	0.05	08/84		.41	2.3	0.14
028054 *	Sence	Blaby	SP 566985	133.0	FVVA	1971–84	623	265	358	389	80	118	76	1.12	0.10	07/76	26.2	.40	2.5	0.16
028028 *	Soar	Wanlip	SK 603109	480.0	CC	1972..81	633	178	455	255	80	121	73	2.70	0.31	08/75		.36	6.4	0.38
028024	Wreake	Syston Mill	SK 615124	413.8	EM	1967..00	641	219	422	335	79	70	76	2.88	0.12	08/76	35.6	.41	6.9	0.31
028056	Rothley Brk	Rothley	SK 580121	94.0	FVVA	1973..00	693	263	430	369	80	87	76	0.78	0.06	08/95	13.5	.46	1.7	0.12
028030 *	Black Brook	Onebarrow	SK 466171	8.4	FL	1967..84	737	297	440	435	77	109	76	0.08	0.01	08/76		.44	0.2	0.01
028093	Soar	Pillings Lock	SK 565182	1108.4	US	1986..00	665	274	391	376	00	159	96	9.62	2.29	08/91		.54	23.0	2.55
028074	Soar	Kegworth	SK 492263	1292.0	US	1978..00	681	298	383	373	00	164	96	12.20	3.23	08/95		.55	26.8	3.46
028029 *	Kingston Brk	Kingston Hall	SK 503277	57.0	CC	1966..84	604	209	395	314	79	65	76	0.38	0.02	08/76		.39	0.7	0.03
028027	Erewash	Sandiacre	SK 482364	182.2	US	1965..99	709	335	374	575	74	190	96	1.93	0.31	09/90	19.5	.55	3.9	0.49
028035	Leen	Nottingham	SK 549392	111.0	US	1967..99	677	199	478	226	82	128	96	0.70	0.11	09/90		.67	1.2	0.22
028009	Trent	Colwick	SK 620399	7486.0	VA	1958–00	776	357	419	527	00	198	76	84.67	18.44	08/76	446.7	.64	173.8	27.15
028060	Dover Beck	Lowdham	SK 653479	69.0	FVVA	1972..00	678	66	612	110	79	33	76	0.14	0.04	09/90	2.2	.76	0.3	0.05
028072	Greet	Southwell	SK 711541	46.2	FV	1975..00	637	221	416	328	79	104	76	0.32	0.06	08/76		.67	0.6	0.10
028017 *	Devon	Cotham	SK 787476	284.0	VA	1966..78	561	173	388	281	77	119	72	1.56	0.05	04/76	26.7	.53	3.6	0.15
028022	Trent	North Muskham	SK 801601	8231.0	USVA	1968–00	761	345	416	519	00	196	76	90.02	19.37	08/76	452.9	.65	182.7	28.15
028059 *	Maun	Mansfield STW	SK 548623	28.8	FLVA	1966..84	733	498	235	667	79	347	76	0.46	0.20	06/76	11.7	.71	0.7	0.23
028115	Maun	Mansfield (Dykes)	SK 559636	31.5	FV	1996–00	757	653	104	800	00	547	97	0.65	0.40	07/96		.77	1.0	0.38
028116	Maun	Whitewater Br	SK 663704	157.0		1997–00	744	165	579	202	00	132	97	0.82	0.47	07/98		.72	1.4	0.43
028045 *	Meden/Maun	Bo'stall/H'ton	SK 681732	262.6	FLVA	1965..84	713	202	511	263	69	102	76	1.68	0.39	08/76	9.8	.78	2.7	0.82
028032	Meden	Church Warsop	SK 558680	63.0	VA	1965..00	725	301	424	450	79	169	96	0.60	0.18	11/78	5.6	.78	1.0	0.24
028044	Poulter	Cuckney	SK 570713	32.2	C	1969..00	688	309	379	527	79	160	76	0.31	0.12	08/76		.92	0.5	0.16
028036 *	Poulter	Twyford Bridge	SK 700752	128.2	US	1969..98	630	155	475	238	70	76	97	0.63	0.11	07/96		.87	1.0	0.23
028015	Idle	Mattersey	SK 690895	529.0	EM	1965..00	658	172	486	309	69	82	97	2.89	0.34	07/96	15.1	.79	4.8	0.82
028049	Ryton	Worksop	SK 575794	77.0	FV	1970..00	660	187	473	350	79	60	76	0.46	0.05	08/76	6.0	.62	1.0	0.08
028091	Ryton	Blyth	SK 631871	231.0	EM	1984..00	639	207	432	319	00	119	96	1.51	0.36	08/90		.71	2.8	0.43
028016 *	Ryton	Serlby Park	SK 641897	231.0	VA	1965–78	647	239	408	425	69	96	76	1.75	0.22	09/75	13.2	.70	3.1	0.43
028047	Oldcoates Dk	Blyth	SK 615876	85.2	FVVA	1970..00	643	248	395	397	79	106	76	0.67	0.11	08/76	10.4	.71	1.1	0.24
028050	Torne	Auckley	SE 646012	135.5	FVVA	1971..00	611	213	398	322	80	117	76	0.92	0.21	08/76		.69	1.6	0.31

Map 5b: MIDLANDS — SEVERN



Area: 11,102 km^2

Average Rainfall (1961–90): 796 mm

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
054091	Severn	Hafren Flume	SN 843878	3.6	FL	1976–99	2616	2006	610	2698	98	1253	76	0.23	0.02	07/84	6.3	.39	0.5	0.03
054090	Tanllwyth	Tanllwyth Flume	SN 843876	0.9	FL	1973..99	2557	2208	349	3224	98	1647	75	0.06	>0.00	07/84	2.3	.30	0.2	0.01
054097	Hore	Upper Hore flume	SN 831869	1.6	FL	1985..99	2838	2129	709	2957	98	1715	95	0.11	0.01	08/95		.32	0.2	0.02
054092	Hore	Hore Flume	SN 846873	3.2	FL	1973..99	2651	1981	670	2740	98	1202	76	0.20	0.01	08/76	6.3	.32	0.5	0.02
054022	Severn	Plynlimon flume	SN 853872	8.7	FL	1953..99	2500	1899	601	2668	98	1149	76	0.52	0.03	08/76	11.8	.34	1.3	0.06
054025	Dulas	Rhos-y-pentref	SN 950824	52.7	FL	1969..00	1321	865	456	1200	00	535	75	1.45	0.01	08/76	21.6	.40	3.8	0.05
054081	Clywedog	Bryntail	SN 913868	49.0	FV	1977..00	2048	1575	473	2247	00	1144	97	2.45	0.22	02/96		.51	5.8	0.29
054042 *	Clywedog	Clywedog Dam	SN 914867	49.0	TP	1971..77	1814	1014	800	1238	74	1005	75	1.58	0.14	01/77		.64	3.8	0.24
054013 *	Clywedog	Cribynau	SN 944855	57.0	MIS	1959–79	1888	1250	638	1885	74	801	67	2.26	0.14	09/59	69.5	.48	5.2	0.29
054080	Severn	Dolwen	SN 996851	187.0	VA	1977..83	1709	1120	589	1139	81	1036	82	6.64	0.68	05/80		.48	16.9	0.85
054014	Severn	Abermule	SO 164958	580.0	VA	1962–00	1293	794	499	1164	00	507	64	14.61	0.98	06/70	199.6	.44	36.2	1.79
054003	Vyrnwy	Vyrnwy Res	SJ 019191	94.3	TP	1920..99n	1909	1420	489	1950	54	768	33	4.25	0.03	08/76	87.2	.37	10.4	0.26
054038	Tanat	Llanyblodwel	SJ 252225	229.0	FV	1973..00	1265	915	350	1370	00	576	75	6.64	0.19	08/76	78.1	.49	16.1	0.51
054028	Vyrnwy	Llanymynech	SJ 252195	778.0	VA	1970–00	1365	870	495	1299	00	565	75	21.46	1.01	08/76	280.7	.45	50.2	2.23
054005	Severn	Montford	SJ 412144	2025.0	USVA	1953..00	1189	676	513	1073	00	426	64	43.42	2.54	09/55	303.5	.47	110.7	5.70
054045 *	Perry	Perry Farm	SJ 347303	49.1	FV	1974–79	830	389	441	482	77	302	75	0.61	0.13	08/76		.73	1.1	0.19
054069 *	Springs Brook	Lower Hordley	SJ 387297	10.4	FV	1974–78		176		230	77	127	75	0.06	0.01	08/76		.65	0.1	0.01
054047 *	Perry	Ruyton Bridge	SJ 403223	155.0	VA	1975–78	713	246	467	338	77	212	76	1.21	0.16	08/76		.69	2.9	0.19
054070 *	War Brook	Walford	SJ 432198	22.5	FV	1974–83	690	205	485	275	82	101	75	0.15	0.00	08/76		.57	0.4	>0.00
054020	Perry	Yeaton	SJ 434192	180.8	C	1963–00	766	281	485	455	00	141	64	1.61	0.21	08/76	9.3	.66	3.4	0.40
054018	Rea Brook	Hookagate	SJ 466092	178.0	FLVA	1962..00	767	310	457	514	00	139	64	1.75	0.11	08/76	22.6	.51	4.2	0.24
054044	Tern	Ternhill	SJ 629316	92.6	TPVA	1972–00	754	287	467	410	00	188	96	0.84	0.29	08/76	4.7	.76	1.4	0.40
054052	Bailey Brook	Ternhill	SJ 629316	34.4	TP	1970..00	705	400	305	859	88	166	96	0.44	0.07	08/76	2.5	.72	0.9	0.11
054061 *	Hodnet Brk	Hodnet	SJ 628288	5.1	FV	1972..77	677	111	566	117	73	80	76	0.02	>0.00	10/75	0.2	.76	0.0	
054062 *	Stoke Brook	Stoke	SJ 637280	13.7	FV	1972..83	699	196	503	274	80	94	76	0.09	0.02	08/76	0.5	.74	0.1	0.03
054058 *	Stoke Park B	Stoke Park	SJ 644260	14.3	FV	1972–78	647	203	444	201	74	150	75	0.09	>0.00	08/76	2.6	.56	0.2	0.02
054041	Tern	Eaton On Tern	SJ 649230	192.0	C C	1972–00	729	277	452	401	00	160	96	1.68	0.44	08/76	11.2	.70	3.0	0.66
054087	Allford Brook	Childs Ercall	SJ 667228	4.7	VN	1973..00	677	107	570	215	00	13	73	0.02	0.00	01/91		.66	0.0	>0.00
054059 *	Allford Brook	Allford	SJ 654223	10.2	FV	1972..78	627	182	445	254	73	114	75	0.06	0.01	08/76	0.9	.66	0.1	0.01
054099	Coley Brook	Coley Mill	SJ 779192	37.3	TP	1997–00	834	333	501	434	99	172	97	0.39	0.12	08/98		.60	0.8	0.12
054040	Meese	Tibberton	SJ 680205	167.8	C	1973–00	708	222	486	309	80	129	96	1.18	0.25	08/76	5.5	.79	2.1	0.45
054066 *	Platt Brook	Platt	SJ 628229	15.7	FV	1973–83	678	149	529	205	80	96	76	0.07	0.01	08/76		.75	0.1	0.03
054060	Potford Brk	Sandyford Br	SJ 634220	25.0	FV	1972..00	682	174	508	275	93	76	97	0.14	0.02	08/76	0.9	.68	0.2	0.05
054083 *	Crow Brook	Horton	SJ 678141	16.7	FV	1978–83	742	261	481	287	82	238	79	0.14	0.08	09/79		.72	0.2	0.07
054094	Strine	Crudgington	SJ 640175	134.0	EM	1982..00	684	165	519	240	00	96	97	0.70	0.16	07/95		.66	1.4	0.20
054065 *	Roden	Stanton	SJ 565241	210.0	VA	1973..79	679	211	468	215	74	142	75	1.41	0.20	08/76	13.9	.67	2.6	0.26
054016	Roden	Rodington	SJ 589141	259.0	FLVA	1961–00	696	238	458	389	00	122	64	1.96	0.22	08/76	14.6	.63	4.3	0.41
054012	Tern	Walcot	SJ 592123	852.0	FV	1960–00	709	256	453	380	66	139	64	6.91	1.17	08/76	40.5	.70	13.5	2.29
054095	Severn	Buildwas	SJ 644044	3717.0	US	1984..00	990	526	464	791	00	371	97	61.98	11.22	05/87		.55	159.9	11.81
054046	Worfe	Cosford	SJ 781046	54.9	TP	1975..00	722	111	611	227	00	43	97	0.19	0.01	07/90		.58	0.4	0.03
054024	Worfe	Burcote	SO 747953	258.0	C	1969–00	699	144	555	240	00	80	97	1.17	0.09	08/76	6.8	.70	2.2	0.32
054034	Dowles Brook	Dowles	SO 768764	40.8	FVVA	1971–00	745	299	446	456	00	186	73	0.39	0.02	07/76	9.6	.40	1.0	0.03
054001	Severn	Bewdley	SO 782762	4325.0	USVA	1921–00	924	451	473	691	60	266	64	61.83	7.46	08/76	357.3	.53	149.0	10.74
054067 *	Smestow Brk	Swindon	SO 861906	81.3	VA	1974–78	631	209	422	266	77	168	75	0.54	0.18	08/76		.61	1.0	0.17
054063	Stour	Prestwood Hosp	SO 865858	89.9	FV	1972..00	743	391	352	476	80	284	96	1.12	0.41	08/00		.64	1.9	0.49
054006	Stour	Kidderminster	SO 830768	324.0	US	1953..00	714	273	441	403	60	182	75	2.80	0.89	08/76	17.4	.71	4.7	1.28
054096	Hadley Brook	Wards Bridge	SO 870631	53.4	FV	1990..00	690	270	420	535	00	107	97	0.46	0.08	09/91		.41	0.7	0.07
054011	Salwarpe	Harford Hill	SO 868618	184.0	FVVA	1961..00	687	228	461	341	00	117	97	1.32	0.27	07/76	20.3	.63	2.4	0.39
054056 *	Clun	Clungunford	SO 393786	195.0	VA	1972..76	830	323	507					2.00	0.26	08/74		.54		
054054 *	Onny	Onibury	SO 455789	235.0	VA	1972–76	759	294	465	401	74	226	75	2.19	0.26	09/75		.51	4.6	0.23
054053 *	Corve	Ludlow	SO 510752	164.0	VA	1972–76	720	195	525	268	74	158	73	1.01	0.09	10/75		.60	2.2	0.09
054008	Teme	Tenbury	SO 597686	1134.4	VA	1956–00	866	405	461	662	00	202	64	14.56	0.74	08/76	145.7	.57	35.3	1.54
054055 *	Rea	Nean Sollars	SO 664724	129.0	MIS	1972..76	732	234	498	224	73	194	75	0.96	0.22	10/75		.67	1.6	0.19
054029	Teme	Knightsford Br	SO 735557	1480.0	FVVA	1970..00	843	377	466	602	00	239	75	17.70	1.00	08/76	183.3	.55	41.1	1.92
054043 *	Severn	Upton	SO 863399	6850.0	VA	1955..70	852	445	407	676	60	309	56	96.58	14.77	09/59	470.0	.55	258.2	25.22
054032	Severn	Saxons Lode	SO 863390	6850.0	US	1970–00	878	400	478	577	00	268	75	86.96	9.93	08/76	462.3	.58	221.1	15.14
054019	Avon	Stareton	SP 333715	347.0	C VA	1962–00	673	231	442	357	00	99	76	2.55	0.25	07/76	35.1	.49	5.8	0.47
054004	Sowe	Stoneleigh	SP 332731	262.0	CC	1952..00	686	365	321	516	00	209	53	3.03	0.89	08/61	31.2	.61	5.5	1.13
054050	Leam	Eathorpe	SP 388688	300.0	FLCB	1987–00	664	149	515	267	00	46	96	1.42	0.25	08/98		.39	3.3	0.24
054049	Leam	Princes Drive	SP 307654	362.0	TPBC	1979..00	671	188	483	291	00	55	96	2.16	0.19	07/84		.40	5.0	0.27
054048	Dene	Wellesbourne	SP 273556	102.0	FV	1976..00	645	190	455	301	77	57	97	0.61	0.03	08/76		.44	1.5	0.06
054010 *	Stour	Alscot Park	SP 208507	319.0	TP+CB	1959..83	671	218	453	380	60	77	73	2.21	0.06	08/76	38.5	.52	5.3	0.26
054007	Arrow	Broom	SP 086536	319.0	C	1957..00	708	278	430	437	00	143	64	2.82	0.51	07/76	42.2	.54	5.5	0.76
054023	Badsey Brook	Offenham	SP 063449	95.8	FV	1968..00	666	213	453	378	99	79	97	0.65	0.03	07/76	10.2	.43	1.6	0.07
054002	Avon	Evesham	SP 040438	2210.0	VA	1936–00	668	222	446	377	00	98	44	15.55	1.93	06/44	147.0	.52	35.2	2.98
054036	Isbourne	Hinton on Green	SP 023408	90.7	C VA	1972..00	706	223	483	377	00	93	76	0.64	0.02	07/76	15.5	.54	1.4	0.09
054015	Bow Brook	Besford Bridge	SO 927463	156.0	FVVA	1969..00	656	228	428	537	99	114	97	1.13	0.01	07/76		.35	2.5	0.10
054089	Avon	Bredon	SO 921374	2674.0	US	1988..99	656	198	458	266	99	101	97	16.76	2.07	08/95		.53	42.4	3.15
054057	Severn	Haw Bridge	SO 844279	9895.0	VA	1971–00	807	341	466	545	00	225	97	107.10	12.28	08/76	493.4	.58	259.7	19.43
054026 *	Chelt	Slate Mill	SO 892264	34.5	FL	1969..83	742	543	199	654	77	400	73	0.59	0.27	06/72	9.0	.71	1.0	0.29
054017	Leadon	Wedderburn Br	SO 777234	293.0	FLVA	1962–00	710	216	494	422	00	99	73	2.01	0.10	07/76	21.7	.51	4.6	0.31
054027	Frome	Ebley Mill	SO 831047	198.0	CBVA	1969–00	864	402	462	651	00	183	76	2.52	0.33	08/76	11.1	.87	4.7	0.77
054098	Cam	Cambridge	SO 754035	29.3	FV	1998–00	1045	622	423	731	00	495	98	0.58	0.15	08/98		.68	1.2	0.21
054085 *	Cannop Brk	Cannop Cross	SO 609115	10.4	FV	1979–83	969	418	551	519	82	358	83	0.14	0.02	08/82		.62	0.3	0.02
054084 *	Cannop Brk	Parkend	SO 616075	31.5	C	1978–83	963	343	620	421	82	272	83	0.34	0.05	11/78		.61	0.8	0.06

Hydrometric Statistics

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
028040 Trent at Stoke on Trent C.A: 53.2 km^2	**68..95**	*861*		**380**		**0.64**	**48.4**	**23/08 1987**	**0.08**	**11/08 1990**	**1.3**	**0.37**	**0.13**
M.A: EA Local No: 4040 Sens.: 18.3 S/full: 45.0m^3s^{-1}													
F.A.R: SGE Level: 113m UE: .14 FAI: 0.980													
Comment: Crump profile weir, 4.12m wide, modular throughout range. Liable to collect rubbish. Affected by impounding res., discharges from three WRW, plus mine drainage. Substantial flow modification in early record but reduced to significant through '80s. Flow affected by STW closure: effluent from Stoke diverted to other STW d/s of gauge. # Moderate relief catchment, significantly urbanised at Biddulph and Stoke on Trent, draining the Coal Measures; approx. quarter of catchment covered with Boulder Clay. Responsive.	1996	659	77	195	51	0.33	10.8	06/08	0.10	05/08	0.6	0.19	0.12
	1997	856	99	305	80	0.51	9.3	31/08	0.11	10/08	1.2	0.26	0.13
	1998	1006	117	458	121	0.77	26.9	22/10	0.12	25/07	1.7	0.36	0.15
	1999	1026	119	460	121	0.78	12.5	01/10	0.11	31/07	1.8	0.45	0.12
	2000	1129	131	594	156	1.00	29.7	05/11	0.12	24/08	2.5	0.49	0.16
028083 Trent at Darlaston C.A: 195.2 km^2	**82..95**	**794**		**584**		**3.61**	**71.8**	**23/08 1987**	**1.25**	**29/08 1994**	**6.5**	**2.73**	**1.48**
M.A: EA Local No: 4083 Sens.:													
F.A.R: PEI Level: 86m UE: FAI:													
Comment: Multipath US gauge installed beneath A34 road bridge on gentle curve. Station undermined in 1987 flood, reconstructed 1990/1. Out-of-bank flow gauged by transducers between bridge abutments. Subject to siltation. Flow regime dominated by Strongford WRW discharge (Stoke-on-Trent). Quite responsive. # Moderate relief catchment, substantially urbanised with Potteries, Biddulph and Leek. Geology: Coal Measures and Marls, Millstone Grit and subordinate Sherwood S'st, widely covered by Boulder Clay. Mining, industrial and mixed agricultural land use.	1996	639	80	411	70	2.54	22.3	06/08	**1.24**	**21/07**	4.1	2.01	1.34
	1997	838	106	529	91	3.28	36.8	31/08	1.37	16/08	6.5	2.26	1.57
	1998	948	119	665	114	4.12	62.0	22/10	1.46	09/08	7.6	2.84	1.63
	1999	996	125	694	119	4.30	37.7	01/10	**1.09**	**31/07**	8.1	3.34	1.65
	2000	1079	136	809	139	4.99	**77.6**	**06/11**	1.51	24/08	10.7	3.47	1.65
028079 Meece Brook at Shallowford C.A: 86.3 km^2	**81..95**	**755**		**206**		**0.56**	**10.8**	**30/12 1981**	**0.07**	**20/08 1995**	**1.1**	**0.37**	**0.12**
M.A: EA Local No: 4079 Sens.:													
F.A.R: EI Level: 81m UE: FAI:													
Comment: Crump profile Flat V weir, 5m wide, 1:10 cross-slopes, with crest tapping. Cableway for out-of-bank flows. Backs up from d/s bridge. Moderate interference from gw pumping and sewage effluent. Baseflow maintained by glacial valley gravel. # Low relief, agricultural catchment, draining Sherwood S'st in the headwaters, Mercia mudstone otherwise.	1996	617	82	108	52	0.29	5.0	19/12	0.07	26/07	0.5	0.20	0.10
	1997	797	106	196	95	0.54	**11.1**	**26/06**	0.17	04/10	0.8	0.31	0.19
	1998	890	118	308	150	0.84	10.6	23/10	0.17	08/08	1.5	0.55	0.23
	1999	953	126	343	167	0.94	8.9	28/01	0.20	30/07	1.7	0.71	0.26
	2000	1020	135	426	207	1.16	9.0	06/11	0.24	25/08	2.6	0.68	0.31
028052 Sow at Great Bridgford C.A: 163.0 km^2	**71..95**	*750*		**215**		**1.11**	**18.8**	**11/02 1977**	**0.12**	**25/08 1976**	**2.1**	**0.79**	**0.33**
M.A: EA Local No: 4052 Sens.: 11.6 B/full: 10.0m^3s^{-1}													
F.A.R: GE Level: 77m UE: <.01 FAI: 0.963													
Comment: Crump profile Flat V weir, 9.1m wide, in trapezoidal channel, with floodbanks to contain out of channel flows. Cableway. Rating problems; weed growth causes variable drowning, affecting high flow quality. Minimal interference from sewage effluent and groundwater pumping for PWS. # Low relief agricultural catchment, primarily on Mercia Mudstone, with some Sherwood Sandstone in headwaters and glacial gravel in valleys which maintain baseflows.	1996	610	81	118	55	0.61	6.0	19/12	0.22	27/07	0.9	0.50	0.29
	1997	784	105	192	89	0.99	11.1	26/06	0.39	10/06	1.5	0.63	0.42
	1998	874	117	282	131	1.46	10.4	23/10	0.41	13/08	2.7	0.96	0.50
	1999	941	125	375	174	1.94	10.1	01/10	0.46	31/07	3.8	1.40	0.53
	2000	1008	134	442	206	2.28	**19.3**	**06/11**	0.55	25/08	4.9	1.31	0.66
028053 Penk at Penkridge C.A: 272.0 km^2	**76..95**	**706**		**259**		**2.24**	**38.6**	**30/12 1981**	**0.19**	**25/08 1976**	**4.2**	**1.45**	**0.64**
M.A: EA Local No: 4053 Sens.: 10.6 B/full: 110.0m^3s^{-1}													
F.A.R: EI Level: 76m UE: .09 FAI: 0.968													
Comment: Originally VA station, 10m wide, cableway span 56m, u/s of A449 road bridge. Problem site subject to weed growth and bed movement, improved after 1976 regrading. Closed 1983, level only site until 1990, when Crump profile Flat V weir in trapezoidal channel (V-full width 8.8m) installed. Sustantial augmentation of flows from WRW. # Low to moderate relief catchment, glacial gravels over Mercia Mudstone to W, Boulder Clay over Sherwood S'st to E. W catchment rural; part of Wolverhampton in S, Cannock in E. Mixed farming, some forestry.	1996	547	77	139	54	1.19	10.9	19/12	0.42	18/09	2.1	0.99	0.46
	1997	696	99	205	79	1.77	30.1	26/06	0.47	03/06	3.5	1.06	0.63
	1998	750	106	284	110	2.45	23.9	10/04	0.61	13/08	4.5	1.60	0.70
	1999	940	133	416	161	3.59	27.0	09/08	0.67	29/07	7.2	2.57	1.01
	2000	950	135	473	183	4.07	**68.1**	**06/11**	0.82	11/09	8.5	2.29	0.96
028014 Sow at Milford C.A: 591.0 km^2	**60..95**	*716*		**289**		**5.42**	**50.1**	**05/12 1960**	**0.39**	**16/11 1965**	**9.9**	**3.92**	**1.41**
M.A: EA Local No: 4014 Sens.: 5.6 B/full: 35.0m^3s^{-1}													
F.A.R: GE Level: 69m UE: .06 FAI: 0.975													
Comment: VA station immediately d/s of Holdiford road bridge. Cableway spans 38m. Channel 25m broad, subject to severe weed growth (retrospective correction of rating made) and siltation; variable and imprecise low flows. Channel regraded 1964-7. Flows not processed between 1977-92. Flows significantly augmented from WRW (Cannock, Stafford). Slow response. # Low relief catchment, rural west, urbanised south and east; Penk drains NW Wolverhampton. Keuper Marl in west, Triassic sandstones in east, appreciable Boulder Clay in south. Mixed farming, light industrial, some forestry.	1996	563	79	181	63	3.38	19.0	20/12	0.76	05/08	6.0	2.87	1.15
	1997	717	100	236	82	4.43	31.6	27/06	1.39	22/07	8.7	3.03	1.85
	1998	788	110	558	193	10.46	35.0	25/10	4.33	02/03	16.1	9.75	4.93
	1999	928	130	622	215	11.66	39.4	29/01	5.66	10/04	19.3	9.52	6.47
	2000	962	134	633	219	11.83	**77.1**	**06/11**	4.43	31/03	20.7	9.21	5.08
028012 Trent at Yoxall C.A: 1229.0 km^2	**59..95**	**766**		**327**		**12.73**	**128.4**	**24/08 1987**	**1.90**	**27/08 1976**	**22.8**	**9.73**	**4.79**
M.A: EA Local No: 4012 Sens.: 4.1 B/full: 165.0m^3s^{-1}													
F.A.R: SRPGEI Level: 56m UE: .07 FAI: 0.957													
Comment: Electromagnetic gauge replaced VA station in 1995 but has underestimated flows >20m^3s^{-1}. Two gauging sites have been used: the 1st closed after river regrading in 1976, the 2nd began in 1974. Earliest record indifferent. Modest bypassing at highest flows. Weed growth severe, needed summer rating adjustments. Substantial flow modification. # Large diverse catchment with Coal Measures in the headwaters and Mercia Mudstone elsewhere, with extensive superficial cover. Large gravel terraces provide storage alongside the main river. Mixed farming, sand and gravel extraction, industrial development.	1996	581	76										
	1997	744	97										
	1998	844	110	320	98	12.46	59.2d	07/03	3.98	13/08	23.7	9.56	4.73
	1999	936	122	670	205	26.10	63.0d	04/10	14.41	09/04	39.6	23.19	16.10
	2000	998	130	424	130	16.50	91.0d	07/11	5.16	25/08	31.9	12.04	5.63
028081 Tame at Bescot C.A: 169.0 km^2	**82..95**	**718**		**469**		**2.51**	**45.7**	**23/08 1987**	**0.72**	**18/10 1995**	**4.0**	**2.01**	**1.10**
M.A: EA Local No: 4081 Sens.:													
F.A.R: EI Level: 107m UE: FAI:													
Comment: Trapezoidal flume, ineffective as d/s regrading work not carried out. Converted to EM with poor results. Bed insulation removed and station converted to US in 1989. High flow rating subject to hysteresis. Substantial imports from WRW. Above 45 m^3s^{-1} washland overspill u/s operates. # Entirely urbanised catchment just below confluence of upper Tame branches. Solid geology: Coal Measures, about 50% covered by Boulder Clay and sand and gravel. Very responsive.	1996	566	79	280	60	1.50	21.1	22/04	**0.57**	**09/09**	2.5	1.30	0.64
	1997	737	103	301	64	1.61	33.5	05/05	0.71	09/06	2.7	1.14	0.78
	1998	828	115	371	79	1.99	29.2	02/06	0.72	13/08	3.6	1.37	0.84
	1999	969	135	460	98	2.46	**46.8**	**01/10**	0.79	31/07	4.4	1.79	1.02
	2000	994	138	485	103	2.59	**56.8**	**05/11**	0.62?	29/08	5.0	1.72	0.87
028039 Rea at Calthorpe Park C.A: 74.0 km^2	**67..95**	*793*		**345**		**0.81**	**63.0**	**23/08 1987**	**0.17**	**01/09 1991**	**1.5**	**0.50**	**0.26**
M.A: EA Local No: 4039 Sens.: 11.5 B/full: 128.0m^3s^{-1}													
F.A.R: E Level: 104m UE: .33 FAI: 0.956													
Comment: Crump profile weir, 3.66m wide, with flanking broad-crested weirs set in a formalised, roughly rectangular channel. Model rated. High flow gauged off nearby footbridge, but hazardous owing to high velocities. Prone to u/s siltation. Significant imports modify flow regime. # Almost totally urbanised catchment overlying clay except in the headwaters in the Lickey Hills. Very responsive, used for flood forecasting.	1996	631	80	216	63	0.51	20.5	06/08	**0.17**	**10/07**	1.0	0.34	0.18
	1997	754	95	243	70	0.57	34.8	08/10	**0.16**	**05/10**	1.1	0.29	0.18
	1998	904	114	359	104	0.84	**67.9**	**26/09**	0.19	13/08	1.8	0.49	0.23
	1999	1011	127	399	116	0.94	65.6	02/06	0.17	31/07	1.7	0.50	0.21
	2000	1063	134	463	134	1.08	43.6	07/12	0.21	24/08	2.4	0.59	0.24
028003 Tame at Water Orton C.A: 408.0 km^2	**55..95**	**737**		**445**		**5.76**	**109.0**	**30/12 1981**	**1.54**	**30/07 1982**	**10.1**	**4.35**	**2.63**
M.A: EA Local No: 4003 Sens.: 3.3 B/full: 100.0m^3s^{-1}													
F.A.R: EI Level: 74m UE: .40 FAI: 0.959													
Comment: Simple Crump profile weir, 8.5m wide, replaced poor, non-operational VA gauge subject to backwater influence and weed growth in 1993. Just u/s of Minworth WRW and trunk sewerage system. Fast responding catchment with effluent baseflow and substantial regime disturbance from imports. # Almost fully urbanised catchment of moderate relief in Birmingham. Solid geology: Mercia Mudstone but subordinate to extensive cover of Boulder Clay and glacial sands and gravel.	1996	580	79	271	61	3.50	38.2	06/08	1.80	10/09	5.6	2.85	1.91
	1997	728	99	317	71	4.11	84.1	11/06	1.90	03/10	6.6	2.70	2.01
	1998	845	115	378	85	4.89	69.2	26/09	2.05	19/08	8.4	3.33	2.21
	1999	971	132	453	102	5.86	105.9	08/08	2.27	25/07	10.3	4.08	2.54
	2000	1007	137	504	113	6.51	85.0	05/11	2.24	11/08	13.2	4.22	2.46
028066 Cole at Coleshill C.A: 130.0 km^2	**73..95**	**733**		**232**		**0.95**	**24.4**	**30/05 1979**	**0.07**	**22/08 1976**	**2.0**	**0.58**	**0.20**
M.A: EA Local No: 4066 Sens.: 26.7													
F.A.R: EI Level: 79m UE: .31 FAI: 0.981													
Comment: Crump profile Flat V weir in trapezoidal channel, 10.9m at V-full, with floodbanks to contain out-of-channel flow. Cableway span 48m, extends across floodbanks. Highest flows inundate narrow floodplain. Moderate modification to flows from effluent returns.. # Substantially urbanised catchment (S Birmingham suburbs). Underlying geology: Mercia Mudstone with extensive coverings of Boulder Clay and glacial sand and gravel. Responsive.	1996	564	77	153	66	0.63	8.7	11/02	0.14	22/07	1.3	0.45	0.15
	1997	681	93	162	70	0.67	14.6	11/06	0.15	11/08	1.5	0.34	0.18
	1998	875	119	259	112	1.07	16.0	25/12	0.16	13/08	2.3	0.63	0.22
	1999	940	128	278	120	1.14	**27.6**	**08/08**	0.17	29/07	2.4	0.69	0.22
	2000	968	132	316	136	1.30	19.6	29/10	0.18	13/09	3.1	0.71	0.23

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
028080 **Tame at Lea Marston Lakes** C.A: 799.0 km^2	**57..95**	**725**		**538**		**13.63**	**219.2**	**30/12**	**4.93**	**09/08**	**22.7**	**10.80**	**7.28**
M.A: EA Local No: 4080 Sens.: B/full: 80.0m^3s^{-1}								**1981**		**1959**			
F.A.R: EI Level: 66m UE: FAI:													
Comment: Unusual twin bay, chevron shaped Crump profile weirs, 21.5m total width, discharging into an inline settlement lagoon. Bypassed at very high flows, poor flow estimation under these conditions. Replaces 28004. Substantial flow modification, large imports. # Substantially urbanised. Solid geology Mercia Mudstone but subordinate to extensive cover of Boulder Clay and glacial sand and gravel in equal proportion.	1996	559	77	437	81	11.04	59.2	11/02	6.60	03/08	16.2	9.51	7.19
	1997	696	96	471	88	11.94	84.1	26/06	7.15	10/08	19.9	9.15	7.53
	1998	848	117	595	111	15.06	99.1	25/12	7.04	09/08	25.7	11.47	7.80
	1999	933	129	661	123	16.74	160.9	08/08	7.61	31/07	28.8	12.88	8.54
	2000	970	134	707	131	17.87	152.5	06/11	7.95	12/09	34.2	12.95	8.35
028026 **Anker at Polesworth** C.A: 368.0 km^2	**66..95**	*668*		**253**		**2.95**	**75.6**	**24/01**	**0.23**	**26/08**	**6.0**	**1.66**	**0.65**
M.A: EA Local No: 4026 Sens.: 15.1 B/full: 47.0m^3s^{-1}								**1988**		**1976**			
F.A.R: GE Level: 60m UE: .07 FAI: 0.991													
Comment: Crump profile weir with flanking floodbanks to contain out-of-channel flows. Cableway and d/s recorder. Low modular limit and prone to weed growth, causing variable drowning and uncertainty with high flows. Substantial modification owing to PWS imports to the catchment. Quite responsive. # Predominantly agricultural catchment (although containing Nuneaton and Hinkley). Lower reaches drain sandstone of the Coal Measures. Sherwood sandstone and Mercia Mudstone over the remainder of the catchment are widely blanketed with Boulder Clay.	1996	488	73	167	66	1.94	15.0	12/02	0.69	20/08	3.6	1.33	0.77
	1997	613	92	163	64	1.90	14.9	29/11	0.72	11/08	3.3	1.33	0.86
	1998	772	116	354	140	4.13	52.7	25/12	0.83	13/08	8.5	2.28	1.04
	1999	793	119	374	148	4.37	**78.4**	**16/01**	0.86	01/08	9.5	2.67	1.00
	2000	833	125	422	167	4.91	**100.6**	**06/11**	0.89	11/08	11.8	2.54	0.97
028019 **Trent at Drakelow Park** C.A: 3072.0 km^2	**66..95**	**724**		**368**		**35.81**	**363.2**	**31/12**	**6.00**	**23/08**	**63.9**	**26.93**	**14.59**
M.A: EA Local No: 4019 Sens.: 3.5 B/full: 200.0m^3s^{-1}								**1981**		**1976**			
F.A.R: PGE Level: 43m UE: .12 FAI: 0.956													
Comment: Velocity-area station. Complex rating history owing to river regrading (1965 and 1973). High flow precision limited by ungauged flow over lb. Flows substantially modified, particularly by imports into the Tame system. Much storage in valley gravels. # Very large catchment. Small areas of Coal Measures in the Stoke area; about 25% covered with Boulder Clay and 10% by valley gravel, terraces and alluvium. Drift free areas mostly Mercia Mudstone and s'st. Large urban industrial areas, otherwise mixed farming.	1996	541	75	223	61	21.64	102.6	20/12	10.62	13/10	36.1	17.66	11.42
	1997	691	95	292	79	28.45	126.6	28/06	14.69	30/10	50.0	21.71	15.70
	1998	818	113	456	124	44.39	180.2	12/04	19.49	25/09	80.8	32.68	21.46
	1999	890	123	508	138	49.53	210.6	17/01	19.76	11/09	94.6	39.98	22.45
	2000	938	130	565	154	54.93	**385.3**	**07/11**	19.46	13/09	112.7	37.75	22.97
028046 **Dove at Izaak Walton** C.A: 83.0 km^2	**69..95**	**1118**		**740**		**1.95**	**28.5**	**21/12**	**0.30**	**09/09**	**3.6**	**1.62**	**0.55**
M.A: EA Local No: 4046 Sens.: 9.4 S/full: 47.0m^3s^{-1}								**1991**		**1976**			
F.A.R: N Level: 131m UE: <.01 FAI: 1.000													
Comment: Crump profile Flat V weir, 7.59m wide, deep vertical sidewalls, modular to bankfull. At high flows may bypass on the lb. Excellent station, narrower than the main channel and thus self cleaning. Natural catchment. # Long narrow catchment. Upper reaches on Millstone Grit mudstone and sandstone. Lh watershed is formed by a steep Carboniferous Limestone ridge. Passage across l'st characterised by deep gorges (Wolfscote Dale, Dove Dale). Moorland.	1996	840	75	458	62	1.20	8.1	30/11	0.33	16/10	2.3	0.94	0.35
	1997	994	89	521	70	1.37	5.8	28/12	0.48	05/10	2.3	1.15	0.57
	1998	1284	115	899	121	2.37	27.4	22/10	0.74	29/09	4.0	2.01	0.86
	1999	1204	108	769	104	2.02	12.7	01/03	0.53	18/09	3.6	1.77	0.60
	2000	1400	125	988	134	2.59	23.3	06/11	0.59	13/09	5.1	2.16	0.67
028031 **Manifold at Ilam** C.A: 148.5 km^2	**68..95**	*1081*		**744**		**3.50**	**160.5**	**21/12**	**0.31**	**27/08**	**7.5**	**2.35**	**0.59**
M.A: EA Local No: 4031 Sens.: 18.1 S/full: 100.0m^3s^{-1}								**1991**		**1976**			
F.A.R: N Level: 131m UE: <.01 FAI: 1.000													
Comment: Crump profile weir, 12.5m wide, modular to bankfull in straight reach, rocky bed, somewhat insensitive but good quality data throughout the range. Minimal interference from PWS. # Headwaters of moderate relief and drain sandstone and mudstone of the Millstone Grit; middle reach has cut deep gorges through Carboniferous Limestone. Responsive catchment. Sheep grazing and moorland.	1996	838	78	476	64	2.24	37.5	25/11	0.35	24/09	4.6	1.28	0.40
	1997	1015	94	580	78	2.73	26.4	07/05	0.70	05/10	5.5	1.77	0.78
	1998	1284	119	924	124	4.35	154.1	22/10	0.97	01/06	8.8	2.80	1.09
	1999	1227	114	826	111	3.89	54.4	01/10	0.59	18/09	8.3	2.79	0.74
	2000	1408	130	999	134	4.69	87.7	06/11	0.66	13/09	10.9	3.24	0.73
028058 **Henmore Brook at Ashbourne** C.A: 42.0 km^2	**74..95**	**874**		**375**		**0.50**	**21.6**	**25/01**	**0.02**	**23/08**	**1.1**	**0.26**	**0.06**
M.A: EA Local No: 4058 Sens.: 13.3								**1995**		**1976**			
F.A.R: SP Level: 116m UE: .01 FAI: 0.977													
Comment: Crump profile Flat V weir, 6.0m wide, within vertical wing walls. Rb approach built up into low floodbank. Modular limit high, but no arrangements to deal with non-modular discharge. Contains Carsington pump storage reservoir. Station closed between 1984 and 1993. # Catchment of moderate relief in S Pennines, draining Drift free Millstone Grit and Carboniferous Limestone. Responsive catchment. Predominantly forest and pasture, some moorland.	1996	739	85	195	52	0.26	8.0	03/12	0.07	19/08	0.6	0.14	0.07
	1997	834	95	203	54	0.27	5.8	28/11	0.08	16/08	0.6	0.17	0.08
	1998	1072	123	353	94	0.47	18.0	22/10	0.08	10/08	1.0	0.25	0.10
	1999	1007	115	314	84	0.42	7.8	15/01	0.06	04/09	0.9	0.27	0.09
	2000	1197	137	422	113	0.56	**25.4**	**05/11**	0.09	04/09	1.1	0.33	0.10
028008 **Dove at Rocester Weir** C.A: 399.0 km^2	**53..95**	**1029**		**586**		**7.42**	**141.6**	**04/12**	**0.62**	**09/09**	**15.6**	**5.23**	**1.67**
M.A: EA Local No: 4008 Sens.: 14.7 S/full: 50.0m^3s^{-1}								**1960**		**1959**			
F.A.R: N Level: 86m UE: <.01 FAI: 0.997													
Comment: Velocity-area station approx. 19.8m wide; old mill weir as rather insensitive control. Gauging from a footbridge. Station bypassed when out of bank (3-4 times per year). Minimal adjustments. # Predominantly upland catchment; headwaters drain Millstone Grit and Carboniferous Limestone. Lower reaches are Carboniferous and Sherwood Sandstones and Mercia Mudstone. Some superficials. Moorland, forestry and pasture.	1996	796	77	381	65	4.81	49.6	29/11	1.30	18/09	9.3	3.29	1.36
	1997	942	92	465	79	5.88	42.0	28/11	2.04	16/08	12.0	3.98	2.12
	1998	1206	117	773	132	9.78	122.4	23/10	2.63	20/08	18.9	6.95	3.14
	1999	1143	111	666	114	8.42	66.9	02/03	1.88	15/09	17.6	6.50	2.07
	2000	1328	129	838	143	10.57	133.1	06/11	1.98	25/08	22.7	7.72	2.15
028061 **Churnet at Basford Bridge** C.A: 139.0 km^2	**75-95**	**954**		**413**		**1.82**	**65.5**	**23/08**	**0.28**	**27/10**	**4.0**	**1.11**	**0.43**
M.A: EA Local No: 4061 Sens.: 35.2 B/full: 67.0m^3s^{-1}								**1987**		**1991**			
F.A.R: SP Level: 133m UE: .02 FAI: 0.931													
Comment: Crump profile Flat V weir in trapezoidal channel. Drowns out owing to weed growth. Substantial modification to flow regime by exports from reservoirs and imports via WRW and industrial usage. Prescribed flow point. Replaced 28042 in 1975. # Catchment of moderate relief with mixed geology; primarily s'st and shale of the Millstone Grit and Coal Measures, with some blanketing of Boulder Clay and glacial sand and gravel. Contains Leek and Tittesworth Res. but otherwise low grade agriculture or pasture.	1996	744	78	208	50	0.91	18.1	25/11	**0.27**	**15/09**	1.7	0.54	0.31
	1997	931	98	307	74	1.35	13.9	27/12	0.35	09/08	3.1	0.72	0.42
	1998	1132	119	518	125	2.28	45.5	23/10	0.36	10/08	4.8	1.10	0.44
	1999	1125	118	472	114	2.08	27.2	01/10	0.34	29/07	4.8	1.20	0.41
	2000	1277	134	659	160	2.89	58.3	06/11	0.47	19/08	7.6	1.32	0.53
028018 **Dove at Marston on Dove** C.A: 883.2 km^2	**61..95**	**941**		**500**		**14.00**	**215.2**	**11/02**	**1.62**	**23/08**	**28.0**	**9.85**	**3.51**
M.A: EA Local No: 4018 Sens.: 5.8 B/full: 130.0m^3s^{-1}								**1977**		**1976**			
F.A.R: SRPG Level: 47m UE: <.01 FAI: 0.984													
Comment: VA station up to 1974 when Flat V Crump profile weir installed. Prone to weed growth; not reliable at high flows; drowns out, very wide floodplain. Small bypass (Tutbury Mill Fleam) included in naturalised flow series (<10% of flow). Moderately affected by imports. Much storage in alluvium, terrace and fluvio-glacial gravel. # Middle and upper reaches drain peat moorland over Carboniferous Limestone and Millstone Grit. Lower reaches broad and meandering. Below Rocester, Sherwood Sandstone and Mercia Mudstone. Pasture, forestry and mixed farming.	1996	726	77	275	55	7.69	75.0	25/11	2.30	17/09	14.4	5.44	2.41
	1997	882	94	348	70	9.75	73.8	29/11	3.29	05/10	18.8	6.76	3.60
	1998	1099	117	604	121	16.92	158.5	07/03	4.13	20/08	30.8	11.05	4.92
	1999	1066	113	555	111	15.54	113.4	03/03	3.65	10/09	30.9	11.72	4.06
	2000	1233	131	704	141	19.66	187.1	06/11	3.81	14/09	43.2	12.90	4.35
028007 **Trent at Shardlow** C.A: 4400.0 km^2	**57..95**	**766**		**374**		**52.23**	**447.4**	**05/12**	**9.12**	**05/10**	**110.8**	**34.19**	**16.49**
M.A: EA Local No: 4007 Sens.: 5.9 B/full: 150.0m^3s^{-1}								**1960**		**1959**			
F.A.R: SRPG Level: 29m UE: .09 FAI: 0.959													
Comment: Originally a VA station reliable in the low to medium range but liable to backing up from Derwent confluence 2km d/s. Closed 30/11/66. Multipath, cross-path US station installed 1991. Almost all floods contained. Substantial flow modification. Much storage in river gravels. # Large catchment. Trent headwaters have small outcrops of Coal Measures; Dove - Millstone Grit and Carb. L'st. 25% covered by Boulder Clay, 10% valley gravels, terraces and alluvium. Drift free areas largely Keuper Marl and s'st. Diverse land use from moorland to industrial.	1996	577	75	213	57	29.64	142.4	20/12	12.74	19/07	53.2	24.02	14.28
	1997	724	95	255	68	35.51	155.1	30/11	16.30	11/08	64.2	26.54	17.72
	1998	875	114	435	116	60.64	325.2	07/03	16.20	11/08	131.1	42.11	20.00
	1999	922	120	449	120	62.62	254.6	18/01	16.80	01/08	128.6	47.64	20.38
	2000	993	130	536	143	74.61	419.0	08/11	18.96	13/09	158.8	49.87	20.76
028001 **Derwent at Yorkshire Bridge** C.A: 126.0 km^2	**33-95**	*1373*		**522**		**2.09**	**150.6**	**09/12**	**0.10**	**05/05**	**4.7**	**0.94**	**0.48**
M.A: EA Local No: 4001 Sens.: 8.8								**1965**		**1974**			
F.A.R: SRP Level: 159m UE: FAI:													
Comment: Two shallow profile trapezoidal flumes with a whaleback divide since 1936; compound sharp-edged weir previously. Below a cascade of 3 reservoirs (built in 1912, 1916, 1946). Within basin diversions (Ashop) and imports (Noe); PWS exports. Long naturalised series available. Monthly naturalised flows 1905-1950 derived from a different source. # Steep moorland catchment, much hilltop peat. Shale and sandstone form the lower parts of the valleys, gritstone tops the hills (Middle Carboniferous).	1996	1174	86	223	43	0.89	16.4	20/12	0.39	10/02	0.7	0.68	0.40
	1997	1249	91	327	63	1.30	20.5	19/02	0.64	17/04	2.4	0.69	0.67
	1998	1663	121	725	139	2.90	67.6	06/03	0.60	18/07	6.8	0.79	0.68
	1999	1540	112	629	120	2.51	42.7	01/03	0.62	09/04	6.4	0.92	0.74
	2000	1857	135	1049	201	4.18	111.7	06/11	0.71	30/08	10.8	1.41	0.73

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
028043	**Derwent at Chatsworth** C.A: 335.0 km^2	**68..95**	**1171**		**587**		**6.23**	**175.4**	**12/04**	**0.60**	**19/08**	**13.9**	**3.47**	**1.47**
M.A: EA	Local No: 4043 Sens.: 12.9 B/full: 208.0m^3s^{-1}								**1970**		**1984**			
F.A.R: SRP	Level: 99m UE: <.01 FAI: 0.913													
Comment: Velocity-area station approx. 36m wide at bankfull. Cableway span 51m. D/s shoal as a control, but shoal and rating are not too stable. All but extreme flows contained. Substantially affected by Derwent reservoirs. # Upland catchment with peat covered moorlands in the headwaters. Some rb tributaries drain the Carboniferous L'st. Quite responsive. Important flood forecasting station. Predominantly pasture.		1996	960	82	354	60	3.75	51.5	20/12	1.20	16/09	7.5	2.26	1.28
		1997	1088	93	462	79	4.91	36.5	19/02	1.89	29/09	10.1	3.42	2.03
		1998	1377	118	842	143	8.94	148.2	27/10	2.10	20/08	17.6	4.97	2.41
		1999	1283	110	705	120	7.49	79.6	01/03	1.82	14/09	16.0	4.88	1.95
		2000	1543	132	1015	173	10.75	**204.3**	**06/11**	2.19	25/08	23.6	6.38	2.35
028023	**Wye at Ashford** C.A: 154.0 km^2	**65..95**	*1155*		**624**		**3.05**	**41.1**	**16/07**	**0.30**	**31/08**	**5.5**	**2.45**	**0.92**
M.A: EA	Local No: 4023 Sens.: 9.3 B/full: 32.0m^3s^{-1}								**1973**		**1976**			
F.A.R: PGE	Level: 139m UE: .01 FAI: 0.984													
Comment: 1:20 Flat V weir commisioned in 1994. Just d/s of bridge in meandering reach; channel 11m wide, cableway span 25m. Inundates lb but bridge stops bypassing. Severe seasonal weed-growth led to closure of original VA station in 1977 (telemetry of levels maintained). Early record of limited value. Modest net augmentation to flows from WRW and PWS. # Moderate to high relief catchment in S Pennines. Carboniferous L'st with basic sills and intrusions in upper catchment. Isolated hill top peat and Boulder Clay. Buxton in headwaters, otherwise moorland, grazing, forested main valley.		1996	933	81	448	72	2.18	12.1	30/11	0.78	27/09	4.4	1.57	0.85
		1997	1106	96	544	87	2.66	11.8	27/12	1.08	05/10	4.4	2.19	1.22
		1998	1424	123	908	146	4.43	**44.3**	**27/10**	1.37	29/09	8.5	3.32	1.54
		1999	1319	114	759	122	3.71	15.4	01/03	0.95	17/09	7.5	3.03	1.04
		2000	1566	136	992	159	4.83	32.3	06/11	1.04	13/09	10.1	3.96	1.18
028011	**Derwent at Matlock Bath** C.A: 690.0 km^2	**58..95**	**1104**		**573**		**12.54**	**436.1**	**09/12**	**0.86**	**14/10**	**26.4**	**8.37**	**3.33**
M.A: EA	Local No: 4011 Sens.: 6.6 B/full: 170.0m^3s^{-1}								**1965**		**1959**			
F.A.R: SRPGEI	Level: 83m UE: <.01 FAI: 0.951													
Comment: Velocity-area station about 20m wide in a deep channel. Well rated. Highest floods will bypass along the adjacent A6 road. Substantially affected by Derwent reservoirs. # Responsive upland catchment with peat covered moorlands in the headwaters. Main Derwent drains the Millstone Grit; the largest tributary, the Wye, drains Carboniferous L'st. Forestry and pasture.		1996	904	82	352	61	7.68	73.7	20/12	2.26	17/09	16.1	4.86	2.41
		1997	1045	95	438	76	9.59	52.0	19/02	3.36	29/09	18.2	6.82	3.75
		1998	1322	120	797	139	17.45	242.0	27/10	4.03	29/09	35.8	10.91	4.74
		1999	1225	111	667	116	14.59	103.9	01/03	2.91	14/09	32.3	10.29	3.20
		2000	1474	134	975	170	21.27	346.4	06/11	3.40	13/09	46.9	13.65	3.69
028117	**Derwent at Whatstandwell** C.A: 755.0 km^2													
M.A: EA	Local No: Sens.:													
F.A.R: SRPGEI	Level: 69m UE: FAI:													
Comment: Large Flat V weir, 25m wide, u/s of A6 road bridge. Built to provide accurate flow info. u/s of Ambergate/Carsington intake point. Cableway installed for full-range calibration up to 1:100 year flows. Flows substantially affected by Derwent reservoirs. # Responsive upland catchment, peat covered moorlands in headwaters. Main Derwent drains the Millstone Grit; the largest tributary, the Wye, drains Carboniferous L'st. Land use mainly pasture and forestry.		1996													
		1997	1032		443		10.62	52.0	19/02	4.21	29/09	19.0	7.93	4.66
		1998	1300		762		18.23	*282.3*	*27/10*	4.75	29/09	35.7	12.09	5.42
		1999	1210		631		15.11	93.5	01/03	4.02	29/08	31.8	10.85	4.38
		2000	1456		887		21.18	238.3	06/11	4.02	13/09	45.1	14.43	4.62
028048	**Amber at Wingfield Park** C.A: 139.0 km^2	**71..95**	**788**		**312**		**1.38**	**32.6**	**25/01**	**0.19**	**09/08**	**2.8**	**0.78**	**0.35**
M.A: EA	Local No: 4048 Sens.: 22.0 B/full: 21.0m^3s^{-1}								**1995**		**1976**			
F.A.R: SRPG	Level: 71m UE: .04 FAI: 0.947													
Comment: Crump profile Flat V weir, 5.49m at V-full, in trapezoidal channel. Higher flows gauged from bridge u/s. Extreme flows bypass on rb. Fairly low modular limit. Contains Ogston PWS reservoir; substantial augmentation from mine pumping and sewage. # Upland catchment with moorland headwaters. Upper half of catchment drains Millstone Grit, partially blanketed with Boulder Clay. Bisects l'st and tuff inlier of Ashover Dome. Lower half - Coal Measures.		1996	682	87	220	71	0.96	16.4	19/12	0.34	06/10	1.8	0.64	0.37
		1997	775	98	252	81	1.11	14.8	20/11	0.43	07/08	2.1	0.71	0.47
		1998	891	113	371	119	1.63	23.9	24/10	0.39	13/08	3.3	0.91	0.44
		1999	888	113	346	111	1.53	31.7	16/01	0.39	12/09	3.4	0.92	0.44
		2000	1052	134	448	144	1.97	**42.5**	**06/11**	0.35	10/09	4.1	1.09	0.37
028055	**Ecclesbourne at Duffield** C.A: 50.4 km^2	**71..95**	**851**		**402**		**0.64**	**33.8**	**25/01**	**0.03**	**26/08**	**1.5**	**0.35**	**0.10**
M.A: EA	Local No: 4055 Sens.: 15.8 B/full: 32.0m^3s^{-1}								**1995**		**1976**			
F.A.R: PE	Level: 69m UE: .01 FAI: 0.997													
Comment: Crump profile Flat V (1:10) weir set in sloping (1:1) 1.25m high sidewalls, 7.2m wide at V-full. Likely to be modular to structurefull. High flows gauged from d/s bridge. Closed 1983-89. PWS abstraction and WRW discharge cancel to yield substantially natural regime. # Moderate relief catchment, solid geology Coal Measures. Minor Boulder Clay cover in mid catchment. Essentially rural; Wirksworth in headwaters.		1996	723	85	242	60	0.38	8.8	03/12	0.06	22/07	0.9	0.20	0.07
		1997	806	95	295	73	0.47	9.9	31/08	0.09	16/08	1.1	0.27	0.12
		1998	1000	118	493	123	0.79	14.4	24/10	0.10	19/08	1.8	0.42	0.12
		1999	976	115	446	111	0.71	10.8	15/01	0.09	10/09	1.8	0.41	0.11
		2000	1155	136	594	148	0.95	30.5	05/11	0.10	25/08	2.2	0.56	0.12
028085	**Derwent at St. Marys Bridge** C.A: 1054.0 km^2	**35..95**	**1001**		**521**		**17.41**	**334.2d**	**10/12**	**1.82**	**30/08**	**36.0**	**11.72**	**4.54**
M.A: EA	Local No: 4085 Sens.: B/full: 92.0m^3s^{-1}								**1965**		**1952**			
F.A.R: SRPGEI	Level: 44m UE: FAI:													
Comment: Ten-channel, interleaved cross path US gauge in the centre of Derby, 1.75km u/s of Longbridge Weir (28010). Record continuous with 28010. Peaks from 1976 only. Derby may flood but bypassing small. Substantial flow modification owing to Derwent reservoirs, milling and PWS abstractions. # Large, predominantly upland catchment draining Millstone Grit and Carboniferous Limestone. Lower reaches drain Coal Measures on the lb and Triassic sandstones and marls on the rb. Peat moorland headwaters; forestry, pasture and some arable.		1996	830	83	275	53	9.17	104.1	20/12	3.54	05/07	18.5	5.89	4.00
		1997	957	96	369	71	12.35	62.3	19/02	4.62	22/09	24.7	8.67	5.54
		1998	1185	118	646	124	21.57	205.4	28/10	4.22	12/08	42.7	14.09	5.50
		1999	1123	112	549	105	18.37	116.9	15/01	4.42	05/09	39.9	12.61	4.69
		2000	1342	134	754	145	25.14	294.0	06/11	4.25	25/08	53.0	16.83	5.05
028067	**Derwent at Church Wilne** C.A: 1177.5 km^2	**73..95**	**991**		**502**		**18.73**	**215.7**	**25/02**	**2.76**	**22/09**	**39.4**	**12.68**	**5.06**
M.A: EA	Local No: 4067 Sens.: 5.4								**1977**		**1976**			
F.A.R: SPEI	Level: 31m UE: .03 FAI: 0.953													
Comment: Crump profile Flat V weir, 27m wide, in trapezoidal channel. No cableway. Very broad floodplain. 20km d/s of St Mary's Bridge; substantial abstractions and returns in between. High flows of variable quality as weir drowns; calculated by extrapolation from St Mary's Bridge and gaugings at Draycott. Can back up from Trent. Prescribed flow point. # Large catchment with moorland headwaters on Carboniferous Grit and Limestone. Lower reaches on Sherwood Sandstone and Mercia Mudstone. Valley broadens considerably below Derby with extensive sand and gravel terraces. Range of agricultural and industrial activity.		1996	802	81	275	55	10.26	99.7	20/12	3.48	27/07	20.2	6.82	4.14
		1997	929	94	376	75	14.04	62.1	20/02	5.48	22/09	26.6	10.32	6.37
		1998	1151	116	673	134	25.12	**248.6**	**28/10**	5.96	18/08	47.3	16.19	7.10
		1999	1093	110	561	112	20.94	146.5	16/01	5.00	30/08	44.0	15.14	5.56
		2000	1302	131	756	151	28.16	**277.6**	**06/11**	4.61	25/08	57.7	18.95	6.06
028082	**Soar at Littlethorpe** C.A: 183.9 km^2	**71..95**	*646*		**245**		**1.43**	**24.5**	**02/02**	**0.11**	**26/08**	**3.1**	**0.75**	**0.30**
M.A: EA	Local No: 4082 Sens.: B/full: 5.5m^3s^{-1}								**1979**		**1976**			
F.A.R: E	Level: 61m UE: .04 FAI: 0.987													
Comment: Electromagnetic station in a straight reach. Flood relief channel joins on the right bank just u/s. Prone to weed growth. Very low velocities; at lowest flows may yield unreliable data. Bypassed at high flows. Substantial imports via WRW. Replaced Narborough (28051) - records combined. # Predominantly agricultural catchment just south of Leicester. Extensive Boulder Clay and glacial gravel cover; Mercia mudstone sediments in some valley flanks. Significant river terraces and alluvium in lower reaches.		1996	491	76	134	55	0.78	9.7	09/01	0.14	14/07	1.5	0.47	0.18
		1997	629	97	127	52	0.74	7.5	29/11	0.17	03/06	1.5	0.45	0.21
		1998	728	113	261	107	1.52	15.3	10/04	0.20	12/08	3.9	0.75	0.26
		1999	743	115	288	118	1.68	**26.2**	**16/01**	0.23	12/09	4.2	0.90	0.28
		2000	817	126	336	137	1.95	21.3	06/11	0.22	13/09	4.9	1.01	0.28
028086	**Sence at South Wigston** C.A: 113.0 km^2	**71..95**	*642*		**280**		**1.00**	**39.7**	**13/01**	**>0.00**	**02/09**	**2.3**	**0.44**	**0.14**
M.A: EA	Local No: 4086 Sens.:								**1993**		**1984**			
F.A.R: EI	Level: 67m UE: FAI:													
Comment: EM gauge set in 1:1 formalised banks and flood embankment, 20m d/s of the control (dismantled railway bridge). Sharp bend immediately d/s, mill stream confluence u/s. Substantially augmented by WRW discharges, particularly Wigston. Moderately responsive. Replaces Blaby (28054). # Moderate to low relief catchment to E and S of Leicester. Mainly Lower Lias (mudstones and l'sts) but wholly blanketed by Boulder Clay and alluvium except for headwaters. Urbanised at bottom end, otherwise arable and grazing land use.		1996	457	71	129	46	0.46	8.2	09/01	0.10	13/07	0.9	0.23	0.12
		1997	648	101	149	53	0.53	6.1	29/11	0.12	10/08	1.1	0.28	0.16
		1998	721	112	301	108	1.08	25.6	10/04	0.13	09/08	2.4	0.46	0.16
		1999	741	115	319	114	1.14	23.4	16/01	0.15	31/07	2.8	0.54	0.18
		2000	816	127	393	140	1.40	39.7	06/11	0.13	12/08	3.3	0.66	0.16
028024	**Wreake at Syston Mill** C.A: 413.8 km^2	**67..95**	*637*		**216**		**2.84**	**99.8**	**09/03**	**0.09**	**27/08**	**6.7**	**1.11**	**0.31**
M.A: EA	Local No: 4024 Sens.: 15.7 B/full: 4.8m^3s^{-1}								**1975**		**1976**			
F.A.R: GE	Level: 48m UE: .02 FAI: 0.941													
Comment: Originally, Crump profile weir 4.6m wide, low modular limit, replaced 1982 with EM gauge. Difficult to gauge; very low velocities at low flows, station bypassed at high flows. May overestimate flows. Fast response. Significant augmentation from WRW. # Moderate relief catchment, draining west from the Oolitic Limestone scarp. Predominantly Boulder Clay overlying Liassic clays. Rural catchment, mixed farming, containing Melton Mowbray.		1996	448	70	98	45	1.28	22.8	12/02	0.22	05/06	2.7	0.53	0.26
		1997	665	104	151	70	1.99	24.0	29/11	0.29	02/06	5.3	0.92	0.34
		1998	762	120	324	150	4.25	52.7	10/04	0.30	20/09	11.1	1.64	0.51
		1999	716	112	279	129	3.66	37.3	08/03	0.34	11/09	10.7	1.40	0.45
		2000	784	123	327	151	4.28	41.1	04/04	0.19	30/01	11.7	1.74	0.51

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
028056	**Rothley Brook at Rothley** C.A: 94.0 km^2	**73..95**	**684**		**264**		**0.79**	**18.8**	**24/02 1977**	**0.05**	**21/08 1995**	**1.7**	**0.42**	**0.14**
M.A: EA	Local No: 4056 Sens.: 17.7 B/full: 23.0m^3s^{-1}													
F.A.R: SE	Level: 47m UE: .06 FAI: 0.979													
Comment: Crump profile Flat V weir in a trapezoidal channel. Possibility of bypassing on rb. Well rated, but backs up from d/s road bridge at highest flows. Substantial imports enter the river from WRW. # Predominantly rural, but drains a portion of NW Leicester and contains number of small towns. Mostly Boulder Clay covered, but ancient Charnwood Forest rocks outcrop to the N.		1996	519	76	134	51	0.40	6.0	19/12	0.05	22/07	0.9	0.22	0.07
		1997	660	96	137	52	0.41	5.0	09/07	0.08	08/08	0.9	0.23	0.10
		1998	815	119	337	128	1.00	15.7	25/12	0.10	20/08	2.2	0.46	0.13
		1999	811	119	336	127	1.00	16.5	16/01	0.09	13/09	2.6	0.52	0.11
		2000	870	127	346	131	1.03	15.9	06/11	0.10	12/09	2.4	0.54	0.13
028093	**Soar at Pillings Lock** C.A: 1108.4 km^2	**86..95**	**655**		**269**		**9.45**	**113.4**	**24/01 1988**	**1.47**	**25/08 1991**	**23.2**	**5.56**	**2.55**
M.A: EA	Local No: 4093 Sens.:													
F.A.R: SPEI	Level: 38m UE: FAI:													
Comment: Multipath US set in Soar Navigation (merges with Grand Union Canal) 100m u/s of Pillings Lock. Low banks. US transducers on the broad floodplain to calibrate out of bank flows. Very substantial flow modification from WRW and reservoirs in Charnwood Forest. # Moderate to low relief catchment with Triassic Marls and S'st to the W and Lias clays and l'sts to the E, widely blanketed in Boulder Clay. Ancient hard rocks outcrop in Charnwood Forest. Lower catchment dominated by Leicester; headwaters rural.		1996	470	72	160	59	5.60	46.3	12/02	1.99	22/09	10.1	3.93	2.29
		1997	649	99	191	71	6.73	46.6	29/11	1.90	04/08	14.3	4.33	2.74
		1998	755	115	357	133	12.56	**143.5**	**10/04**	2.57	22/08	28.6	6.70	2.89
		1999	742	113	329	122	11.58	120.4	17/01	2.46	12/09	27.9	6.68	2.74
		2000	811	124	379	141	13.27	115.7	06/11	2.60	13/08	32.3	7.25	2.77
028074	**Soar at Kegworth** C.A: 1292.0 km^2	**78..95**	**678**		**306**		**12.52**	**105.6**	**14/01 1993**	**2.48**	**16/09 1979**	**27.5**	**8.04**	**3.56**
M.A: EA	Local No: 4074 Sens.:													
F.A.R: SPEI	Level: 32m UE: FAI:													
Comment: Multi-path US gauge rebuilt in 1991 (no data Jan and Feb 1991) to improve on accuracy of existing single-path gauge (1978-84). Replaced VA site at Zouch. Reach at station is canalised part of Soar navigation, has low velocities and wide floodplain. Bypassing possible above bankfull (>3.15m) . Flows substantially modified by inputs from WRW along Soar valley. # Moderate to low relief. Geology: Mercia Mudstone and S'st in W; Lias clays and l'sts in E, overlain with Boulder Clay. Ancient hard rocks outcrop in Charnwood Forest. Catchment predominately rural but contains Leicester and Loughborough. Agricultural land use.		1996	477	70	164	54	6.70	43.3	12/02	2.85	18/08	11.5	4.98	3.13
		1997	644	95	193	63	7.90	58.3	24/08	3.35	01/06	15.9	5.41	3.75
		1998	764	113	346	113	14.19	133.1	**11/04**	3.49	20/08	31.4	7.84	3.94
		1999	751	111	335	109	13.72	113.1	17/01	2.53	22/08	33.5	7.52	3.18
		2000	815	120	374	122	15.29	122.7	07/11	3.00	13/08	37.9	8.63	3.37
028027	**Erewash at Sandiacre** C.A: 182.2 km^2	**65..95**	**711**		**351**		**2.03**	**39.9**	**22/06 1982**	**0.20**	**02/09 1990**	**4.1**	**1.43**	**0.48**
M.A: EA	Local No: 4027 Sens.: 18.3 B/full: 730.0m^3s^{-1}													
F.A.R: GEI	Level: 33m UE: .11 FAI: 0.915													
Comment: Two rectangular concrete flood drainage channels, each 3.9m wide, 3.09m deep, separated by divide wall 1.2m high. Unstable ratings. Informal low flow controls installed 1981; data improved but use with care (esp. low flows). Closed 1984, reopened 1991 as multiple US operation. Stop boards can close one channel at low flows. All flows contained. Substantial augmentation from mine drainage and mining towns' STW. # Low to moderate relief catchment draining Carboniferous Coal Measures with Permian and Triassic rocks on E and S boundaries. Significant urban fraction, otherwise arable and grazing land use.		1996	550	77	190	54	1.09	13.3	20/12	0.47	13/10	2.0	0.79	0.51
		1997	700	98	213	61	1.23	10.2	28/11	0.33	11/08	2.3	0.82	0.49
		1998	789	111	311	89	1.80	15.6	06/03	0.42	12/08	4.1	0.99	0.47
		1999	779	110	331	94	1.91	32.8	10/03	0.49	11/09	4.5	1.16	0.54
		2000	926	130										
028035	**Leen at Triumph Road Nottingham** C.A: 111.0 km^2	**67..95**	**679**		**214**		**0.75**	**17.1**	**31/07 1994**	**0.05**	**03/08 1990**	**1.2**	**0.52**	**0.22**
M.A: EA	Local No: 4035 Sens.: 18.1													
F.A.R: GEI	Level: 24m UE: FAI:													
Comment: Two rectangular concrete flood drainage channels, each 3.05m wide, 2.75m deep, separated by divide wall 1m high. Unstable ratings. Informal low flow controls installed 1981; data improved but use with care (esp. low flows). Closed 1984, reopened in 1991 as multiple US operation. All flows contained. Minor net disturbance to baseflow dominated flow regime. # Moderate to low relief catchment draining south into Nottingham. Geology: Magnesian Limestone, Permian Marl and Sherwood Sandstone. Significant urban fraction in lower catchment, otherwise arable and grazing land use.		1996	539	79	128	60	0.45	7.7	19/12	0.12	22/07	0.7	0.39	0.18
		1997	647	95	139	65	0.49	11.4	26/07	0.19	05/06	0.8	0.38	0.25
		1998	780	115	*213*	100	0.75					1.3	0.57	0.31
		1999	714	105	194	91	0.68	10.2	09/03	0.17	29/07	1.3	0.53	0.23
		2000	890	131										
028009	**Trent at Colwick** C.A: 7486.0 km^2	**58..95**	**769**		**355**		**84.28**	**956.7**	**25/02 1977**	**14.70**	**23/08 1976**	**171.4**	**58.81**	**27.17**
M.A: EA	Local No: 4009 Sens.: 2.6 B/full: 550.0m^3s^{-1}													
F.A.R: SRPGEI	Level: 16m UE: .08 FAI: 0.926													
Comment: Velocity-area station in navigable Trent. Main channel approx. 62m wide; cableway span 99m. Holme sluices 750m u/s affect water levels up to medium flows. Bypassed at high flows on rb when gravel workings inundated, but bank mods. and construction of Holmepierpoint canoeing course make this less likely. Use highest and lowest flows with care. Very substantial flow modifications owing to imports, WRW, cooling water and industrial usage. # Predominantly impervious - glacial clay and Mercia Mudstone, but some sandstone and limestone. Extensive terrace gravels and alluvium maintain baseflow.		1996	587	76	205	58	48.65	295.8	20/12	22.62	23/07	94.2	36.37	23.88
		1997	734	95	245	69	58.21	272.9	30/11	26.66	05/10	109.9	41.44	28.34
		1998	890	116	434	122	102.96	484.3	08/03	25.60	21/08	215.1	67.59	31.16
		1999	901	117	438	123	103.88	424.0	17/01	28.94	31/07	224.6	77.14	32.30
		2000	996	130	529	149	125.17	**1019.0**	08/11	29.16	25/08	275.1	82.07	31.92
028060	**Dover Beck at Lowdham** C.A: 69.0 km^2	**72..95**	**671**		**67**		**0.15**	**11.6**	**27/05 1972**	**0.03**	**22/08 1995**	**0.3**	**0.10**	**0.05**
M.A: EA	Local No: 4060 Sens.: 8.0													
F.A.R: G	Level: 28m UE: .03 FAI: 0.959													
Comment: Crump profile Flat V weir (1:10) in a trapezoidal (1:1) channel. Subject to weed growth; low modular limit. Sluggish response, baseflow dominated. Affected by spray irrigation abstraction and minor WRW effluent. # The river drains SE from a moderate to low relief catchment. The bulk of the catchment comprises outcrop Triassic s'st; flanking hills nearer the gauge are of Mercia Mudstone. Entirely rural, mixed farming		1996	537	80	43	64	0.09	1.3	19/12	0.03	02/10	0.1	0.09	0.04
		1997	623	93	39	58	0.08	0.7	26/07	0.04	09/09	0.1	0.08	0.04
		1998	781	116	75	112	0.16	3.0	10/04	0.05	18/08	0.3	0.14	0.06
		1999	725	108	76	113	0.17	3.4	15/01	0.04	21/07	0.3	0.11	0.05
		2000	892	133	88	131	0.19	3.1	06/11	0.04	09/09	0.4	0.11	0.05
028022	**Trent at North Muskham** C.A: 8231.0 km^2	**68..95**	**753**		**342**		**89.29**	**1006.0**	**26/02 1977**	**15.43**	**23/08 1976**	**179.6**	**63.40**	**27.95**
M.A: EA	Local No: 4022 Sens.: 7.9 B/full: 250.0m^3s^{-1}													
F.A.R: SRPGEI	Level: 5m UE: .07 FAI: 0.912													
Comment: US gauge augmented VA station for low flows in 1996. Cableway span 105m; lowest Trent gauge above tidal limit. Backwater from Cromwell Lock d/s affects high flow rating. Above 7.8m station bypassed on rb; volumes not great. Very substantial flow modifications owing to imports, WRW, cooling water and industrial usage. # Largest gauged catchment on Trent, with gamut of land use. Predominantly impervious owing to glacial clay and Mercia Mudstone, but some s'st and l'st (Dove, Derwent and d/s Nottingham).		1996	577	77	202	59	52.58	291.1	21/12	23.43	22/07	100.6	40.61	25.54
		1997	722	96	241	70	62.84	274.7	30/11	29.55	10/06	114.8	46.65	31.00
		1998	875	116	427	125	111.32	488.2	07/01	31.34	13/08	223.4	73.83	35.72
		1999	881	117	419	123	109.33	451.2	17/01	29.57	31/07	236.4	80.12	32.95
		2000	980	130	520	152	135.36	**1079.0**	08/11	31.72	25/08	280.8	89.43	35.47
028115	**Maun at The Dykes, Mansfield** C.A: 31.5 km^2													
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 69m UE: FAI:													
Comment: Crump profile Flat V (1:10) weir, 4.8m wide, low vertical wingwalls set in wider channel. Lb at about 2m, rb higher. Fully contained. Weir prone to u/s siltation - affects calibration; rating based on gaugings. Superseded 28059. Low flows dominated by sewage effluent (approx. 3 times natural flow) and augmented by runoff from urban area - catchment area increases by approx. 5 sq.km. # Moderate relief catchment near headwaters of Maun. Rises on Magnesian Limestone and crosses onto Sherwood S'st. Rural headwaters, but Mansfield immediately u/s.		1996	597		554		0.55	8.1	06/08	0.31	27/07	0.8	0.50	0.37
		1997	674		547		0.55	15.5	31/08	0.34	09/08	0.8	0.47	0.38
		1998	790		648		0.65	12.6	30/09	0.34	08/08	0.9	0.55	0.40
		1999	782		718		0.72	15.1	02/07	0.42	06/08	1.1	0.62	0.45
		2000	940		803		0.80	9.9	05/11	0.43	12/09	1.3	0.64	0.47
028116	**Maun at Whitewater Bridge** C.A: 157.0 km^2													
M.A: EA	Local No: Sens.:													
F.A.R: GE	Level: 32m UE: FAI:													
Comment: Flat V weir, 5.2m wide with 0.64m high wingwalls. Built to measure flows d/s of Sherwood Sandstone aquifer and to complement gauge at Mansfield (28115) which measures flows u/s of aquifer.		1996												
		1997	621											
		1998	741		162		0.81	*5.5*	*10/04*	0.34	09/08	1.3	0.68	0.42
		1999	723		165		0.82	5.2	16/01	0.32	01/08	1.3	0.70	0.39
		2000	886		203		1.01	10.1	06/11	0.39	22/07	1.7	0.76	0.47

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
028032	**Meden at Church Warsop** C.A: 63.0 km^2	**65..95**	**722**		**312**		**0.62**	**11.6**	**25/02 1977**	**0.14**	**03/11 1978**	**1.1**	**0.51**	**0.25**
M.A: EA	Local No: 4032 Sens.: 7.8 S/full: 45.0m^3s^{-1}													
F.A.R: GEI	Level: 56m UE: .09 FAI: 0.972													
Comment: Non-standard trapezoidal flume, treated as VA station and rated by c/m. Built to measure flows entering Sherwood S'st outcrop. Mining subsidence in 1976 caused permanent drowning of flume until d/s channel regraded in 1981. Flows signif. affected by u/s quarry de-watering, giving recessions stepped appearance. <60% of low flows comprised of effluent. Closed between 1984 and 1990. # Ribbon-like, SW-NE catchment of moderate relief, rising on Magnesian L'st, subordinate Permian Marl and Sherwood S'st. Mining was dominant industry; many spoil tips. Sutton in Ashfield in headwaters, also part of Mansfield Woodhouse.	1996	578	80	170	54	0.34	3.7	19/12	0.18	18/08	0.5	0.29	0.20
	1997	652	90	172	55	0.34	2.3	31/08	0.19	16/08	0.5	0.30	0.22
	1998	763	106	272	87	0.54	3.3	10/04	0.24	20/09	0.9	0.46	0.26
	1999	770	107	280	90	0.56	4.2	09/03	0.22	12/09	1.0	0.44	0.24
	2000	924	128	347	111	0.69	9.7	06/11	0.24	12/09	1.4	0.45	0.26
028044	**Poulter at Cuckney** C.A: 32.2 km^2	**69..95**	*688*		**319**		**0.33**	**1.9**	**08/04 1979**	**0.08**	**29/07 1976**	**0.5**	**0.29**	**0.16**
M.A: EA	Local No: 4044 Sens.: 19.4 S/full: 228.0m^3s^{-1}													
F.A.R: GE	Level: 47m UE: FAI:													
Comment: Crump profile weir 3.71m broad, modular to bankfull. Designed to measure the flow as the Poulter entered the Bunter S'st outcrop. High baseflow component, subdued hydrographs. U/s water gardens further damp response. U/s farm abstraction. Minimal modifications to flow regime from WRW. # Catchment of moderate relief draining from the scarp of the Magnesian L'st eastwards. Subordinate outcrops of Permian Marl. Some urban development and coal mining spoil heaps.	1996	552	80	186	58	0.19	0.5	19/12	0.10	10/07	0.2	0.19	0.14
	1997	622	90	196	61	0.20	0.5	31/08	0.14	11/10	0.2	0.20	0.16
	1998	708	103	286	90	0.29	0.7	31/07	0.19	24/07	0.4	0.29	0.22
	1999	719	105	321	101	0.33	0.7	09/03	0.20	29/07	0.5	0.30	0.22
	2000	877	127	329	103	0.34	1.3	06/11	0.21	13/09	0.6	0.28	0.23
028036	**Poulter at Twyford Bridge** C.A: 128.2 km^2	**69..95**	*641*		**176**		**0.72**	**5.0**	**09/03 1975**	**0.04**	**23/07 1971**	**1.1**	**0.60**	**0.31**
M.A: EA	Local No: 4036 Sens.: 13.2 S/full: 17.0m^3s^{-1}													
F.A.R: SRGE	Level: 17m UE: FAI:													
Comment: Original 4.88m wide Crump profile weir submerged from late 1972 by mining subsidence; regrading late 1981 no solution. Single path US gauge attached to wing walls in 1992 allowed monit-oring to resume. Patchy record. Gauge sited where Poulter leaves Sherwood Sandstone outcrop. Minor augmentation from sewage; inline lakes in Clumber and Welbeck Parks ensure sluggish response. # Catchment rises on Magnesian Limestone with subordinant Permian Marl; mainly underlain by Sherwood Sandstone. Predominantly rural; part of Bolsover and Shirebrook in headwaters.	1996	513	80	94	53	0.38	0.9	21/12	0.05	28/07	0.6	0.40	0.10
	1997	592	92	76	43	0.31	0.6	25/12	0.10	09/08	0.4	0.32	0.15
	1998	673	105	112	64	0.46	1.1d	14/07	0.09	10/09	0.6	0.43	0.25
	1999	678	106											
	2000	824	129											
028015	**Idle at Mattersey** C.A: 529.0 km^2	**65..95**	*652*		**189**		**3.16**	**18.5**	**02/06 1983**	**0.46**	**06/08 1992**	**5.2**	**2.52**	**0.92**
M.A: EA	Local No: 4015 Sens.: B/full: 15.0m^3s^{-1}													
F.A.R: SRGE	Level: 4m UE: .07 FAI: 0.920													
Comment: Originally VA station prone to severe seasonal weed growth and unstable ratings; EM gauge since 1982 in reach between two bridges and trapezoidal flood banks. Fully contained. Data telemetered to West Stockwith PS. Slow response. Lowest flows may be unreliable. # Low relief catchment, moderate in headwaters. Tributaries rise on Magnesian Limestone, then traverse outcrop of Sherwood Sandstone. Lower reaches underlain by alluvium and Mercia Mudstone. Predominantly rural, arable farming; Mansfield in headwaters.	1996	516	79	83	44	1.39	8.0	20/12	0.19	21/07	2.3	1.28	0.32
	1997	594	91	82	43	1.38	4.8	27/06	0.53	05/06	2.0	1.28	0.66
	1998	691	106	119	63	1.99	8.9	11/04	0.72	14/08	3.2	1.76	0.85
	1999	694	106	127	67	2.13	9.5	10/03	0.59	01/08	3.5	1.89	0.79
	2000	844	129	147	78	2.46	17.8	07/11	0.76	23/07	4.6	1.92	0.99
028049	**Ryton at Worksop** C.A: 77.0 km^2	**70..95**	**654**		**191**		**0.47**	**15.7**	**01/08 1982**	**0.04**	**07/08 1976**	**1.0**	**0.29**	**0.08**
M.A: EA	Local No: 4049 Sens.: B/full: 30.0m^3s^{-1}													
F.A.R: GE	Level: 32m UE: .07 FAI: 0.939													
Comment: Crump profile Flat V weir, 4.57m at V-full, in trapezoidal channel. D/s bridge provokes early non-modularity. Modified stage discharge curve produced for non-modularity at high flows. Significant flow augmentation via gw pumping and WRW, and abstractions for canal use. # Catchment of moderate relief on dip slope of Magnesian L'st outcrop; narrow band of Permian Marl near gauge. High baseflow component and subdued hydrographs. Extractive industries in W; mixed farming, forestry.	1996	539	82	76	40	0.19	5.4	20/12	0.04	18/08	0.3	0.12	0.05
	1997	646	99	117	61	0.29	2.7	24/02	0.07	04/10	0.6	0.19	0.09
	1998	704	108	208	109	0.51	4.6	02/06	0.11	23/09	1.0	0.38	0.13
	1999	678	104	179	94	0.44	3.4	09/03	0.08	14/09	0.8	0.33	0.10
	2000	853	130	270	141	0.66	10.4	07/11	0.10	12/09	1.6	0.34	0.14
028091	**Ryton at Blyth** C.A: 231.0 km^2	**84..95**	**629**		**206**		**1.51**	**21.8**	**07/04 1987**	**0.15**	**05/08 1990**	**2.9**	**1.11**	**0.40**
M.A: EA	Local No: 4091 Sens.:													
F.A.R: EI	Level: 8m UE: FAI:													
Comment: EM station in a straight reach, d/s of a gentle bend. Data transmitted to West Stockwith pumping station to control regime to the tidal Trent. Extreme events only would overtop flood banks. Deep, slow, baseflow dominated flow regime. Replaces 28016. Moderate net effect on flows by WRW and abstraction. # Moderate and low relief catchment. Headwaters drain Magnesian Limestone; bulk underlain by Permian Marl and Sherwood Sandstone. Mainly drift free. Apart from Worksop, wholly rural, mainly arable farming.	1996	513	82	120	58	0.87	14.7	20/12	0.20	21/08	1.3	0.75	0.32
	1997	618	98	153	74	1.12	7.6	31/08	0.45	04/06	1.8	0.96	0.57
	1998	694	110	224	109	1.64	11.4	09/04	0.48	19/08	2.8	1.36	0.60
	1999	678	108	230	112	1.69	10.6	09/03	0.61	31/07	2.8	1.41	0.73
	2000	829	132	320	155	2.33	22.9	07/11	0.81	11/09	4.4	1.58	0.93
028047	**Oldcoates Dyke at Blyth** C.A: 85.2 km^2	**70..95**	**634**		**246**		**0.66**	**43.3**	**02/05 1983**	**0.08**	**25/08 1976**	**1.1**	**0.46**	**0.24**
M.A: EA	Local No: 4047 Sens.: 13.0 B/full: 14.9m^3s^{-1}													
F.A.R: E	Level: 11m UE: .07 FAI: 0.959													
Comment: Crump profile Flat V weir set in 1:2 sloping sidewalls (7.3 wide at vee full). Reasonable approach d/s of a road bridge. Wading gaugings taken u/s of bridge should site back up owing to weed growth. Low modular limit but rarely exceeds vee full. Base flow dominated. Substantial augmentation of low flows from WRW. # Moderate relief catchment, sited where the river crosses the Triassic s'st outcrop, mostly draining Magnesian L'st but includes Coal Measures, Permian Marl s'sts. Rural catchment, arable farming.	1996	522	82	158	64	0.43	12.1	19/12	0.17	20/07	0.6	0.37	0.19
	1997	637	100	189	77	0.51	8.0	17/08	0.23	16/08	0.8	0.42	0.28
	1998	718	113	281	114	0.76	11.2	09/04	0.31	20/08	1.2	0.60	0.35
	1999	691	109	277	113	0.75	5.6	06/03	0.31	29/07	1.2	0.62	0.37
	2000	842	133	392	159	1.06	28.2	06/11	0.35	24/08	1.8	0.68	0.38
028050	**Torne at Auckley** C.A: 135.5 km^2	**71..95**	**607**		**217**		**0.93**	**29.6**	**17/07 1973**	**0.16**	**06/09 1976**	**1.6**	**0.66**	**0.32**
M.A: EA	Local No: 4050 Sens.: 12.5 B/full: 76.0m^3s^{-1}													
F.A.R: GE	Level: 2m UE: FAI:													
Comment: Crump profile Flat V weir in trapezoidal channel, 8.9m wide at V-full. Original cableway removed. Affected by subsidence in 1990s, second well installed d/s. Bypassing unlikely but extent of drowning under review. High range unreliable from backing up from artificial drainage and/or summer weed growth. Sluggish response. Substantial flow augmentation from WRW and mine drainage. # R. Torne rises on dip slope of Magnesian L'st and Sherwood S'st but soon enters Trent/Humber ancient floodplain. Tidally drained. Contains mine workings and agriculture.	1996	491	81	118	54	0.51	6.8	20/12	0.17	02/08	0.8	0.43	0.21
	1997	604	100	155	71	0.67	6.0	18/08	0.24	10/06	1.1	0.57	0.29
	1998	649	107	205	94	0.88	5.8	18/01	0.29	28/07	1.5	0.73	0.36
	1999	644	106	216	100	0.93	7.4	17/04	0.28	27/07	1.5	0.76	0.39
	2000	782	129	283	130	1.21	10.5	07/11	0.32	18/08	2.5	0.75	0.37
054091	**Severn at Hafren Flume** C.A: 3.6 km^2	**76-95**	**2586**		**1980**		**0.23**	**22.3**	**15/08 1977**	**0.01**	**04/09 1976**	**0.5**	**0.13**	**0.03**
M.A: CEHW	Local No: 113 Sens.:													
F.A.R:	Level: m UE: <.01 FAI: 1.000													
Comment: Rectangular, side contracted critical depth flume designed to gauge streams which have supercritical flow regimes. Drowning may occur following big floods owing to sediment deposited d/s. Natural, IH research catchment nested within 54022. Primary 15 minute dataset available. # Upper third has rounded, peat moorland headwaters; lower two thirds has steep, incised valleys with mature conifer plantations. Geology: Palaeozoic shales, grits and mudstones. Very wet (>2500mm). Rainfall, evaporation and soil moisture estimates also available from dense monitoring network.	1996	2168	84	*1650*	83	0.19	6.0	31/10	0.03	17/08	0.4	0.11	0.03
	1997	2295	89	1658	84	0.19	4.3	09/12	0.03	22/04	0.4	0.11	0.04
	1998	3460	134	2699	136	0.31	7.3	27/10	0.04	30/05	0.7	0.18	0.06
	1999	3199	124	2365	119	0.27	6.7	28/02	0.03	31/07	0.6	0.14	0.04
	2000	3498	135	2850	144	0.33	5.8	29/10	0.04	30/07	0.8	0.20	0.06
054090	**Tanllwyth at Tanllwyth Flume** C.A: 0.9 km^2	**73..95**	**2535**		**2172**		**0.06**	**5.6**	**15/08 1977**	**>0.00**	**26/08 1984**	**0.2**	**0.03**	**0.01**
M.A: CEHW	Local No: 111 Sens.:													
F.A.R:	Level: 357m UE: <.01 FAI: 1.000													
Comment: Rectangular,side contracted critical depth flume designed to gauge streams which have supercritical flow regimes. U/s sediment trap for sediment yield studies assists in maintaining performance. Natural catchment nested within 54022. Primary 15 minute dataset available. # Steep and very wet (2500mm). Mature coniferous plantations cover catchment. Geology: Silurian shales and grits: Rainfall, evaporation and soil moisture estimates also available from dense monitoring network.	1996	2120	84	*1816*	84	0.05	2.3	31/10	>0.00	15/08	0.1	0.02	0.01
	1997	2199	87	1900	87	0.05	1.7	09/12	0.01	07/01	0.1	0.03	0.01
	1998	3333	131	3232	149	0.09	2.6	22/10	0.01	03/02	0.2	0.05	0.02
	1999	3067	121	2796	129	0.08	2.5	28/02	0.01	17/07	0.2	0.04	0.01
	2000	3359	133	3371	155	0.10	1.8	30/01	0.01	27/01	0.3	0.05	0.02

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
054097	**Hore at Upper Hore flume** C.A: 1.6 km^2	**85..95**	**2796**		**2089**		**0.11**	**3.9**	**28/10 1989**	**0.01**	**24/07 1989**	**0.2**	**0.05**	**0.01**
M.A: CEHW	Local No: Sens.:													
F.A.R: N	Level: m UE: FAI:													
Comment: Rectangular,side contracted critical depth flume designed to gauge streams which have supercritical flow regimes. Drowning may occur following big floods owing to sediment deposited d/s. Natural catchment nested within 54022. Researchers should note the availability of the primary 15 minute dataset. # The highest and southern lateral fringes of catchment are peat moorland. Remaining 70% has mature coniferous forest planted in 1958 and 1960. Geology: Palaeozoic grits and shales. Very steep gradients, 2700 mm rain. Rainfall, evaporation and soil moisture estimates also available from dense monitoring network.		1996	2334	83					3.5	31/10			
		1997	2456	88	1724	83	0.09	2.8	09/12	0.01	20/04	0.2	0.05	0.02
		1998	3673	131	2955	141	0.15	3.7	22/10	0.02	31/05	0.3	0.08	0.03
		1999	3347	120	2512	120	0.13	3.3	28/02	0.01	30/07	0.3	0.06	0.02
		2000	3660	131										
054092	**Hore at Hore Flume** C.A: 3.2 km^2	**73..95**	**2624**		**1961**		**0.20**	**8.5**	**28/10 1989**	**0.01**	**03/09 1976**	**0.5**	**0.10**	**0.02**
M.A: CEHW	Local No: 115 Sens.:													
F.A.R:	Level: m UE: <.01 FAI: 1.000													
Comment: Rectangular, side contracted critical depth flume designed to gauge streams which have supercritical flow regimes. Drowning may occur following big floods owing to sediment deposited d/s. Natural, IH research catchment nested within 54022. Primary 15 minute dataset available. # Highest and lateral fringes of catchment are peat moorland. The remaining 78% had mature coniferous forest until 1985, when the lower two thirds was clear felled. Replanting has taken place. Geology: Palaeozoic grits, shales and mudstones. Very steep gradients, 2600mm rain. Rainfall, evaporation and soil moisture estimates also available from dense monitoring network.		1996	2213	84	*1594*	81	0.16	7.4	31/10	0.03	17/08	0.4	0.08	0.02
		1997	2300	88	1630	83	0.17	5.1	09/12	0.02	21/04	0.4	0.08	0.03
		1998	3483	133	2737	140	0.28	7.8	22/10	0.03	30/05	0.6	0.14	0.04
		1999	3196	122	2333	119	0.24	7.2	28/02	0.02	14/09	0.6	0.11	0.03
		2000	3496	133	2832	144	0.29	5.7	30/01	0.03	29/07	0.8	0.15	0.04
054022	**Severn at Plynlimon flume** C.A: 8.7 km^2	**53..95**	**2473**		**1881**		**0.52**	**32.2**	**15/08 1977**	**0.01**	**06/05 1957**	**1.3**	**0.28**	**0.05**
M.A: CEHW	Local No: 2103 Sens.: 19.0 S/full: 43.0m^3s^{-1}													
F.A.R: N	Level: 331m UE: <.01 FAI: 1.000													
Comment: Since 1968, trapezoidal flume with side contractions, capacity 43 m^3s^{-1}. U/s silt trap (installed Oct 1971) improved station performance but extreme low flows suspect. A compound sharp-edged weir, capacity 10 m^3s^{-1}, with flanking broad crests provided poor quality data from 1953-58. Natural flow regime. IH (now CEH Wallingford) experimental catchment; 15 min. runoff totals available, also rainfall, evaporation and soil data from a dense monitoring network. # Very wet (2400mm), responsive catchment on Palaeozoic shales, grits and mudstones. 67% of catchment afforested up to 1985 when some clear felling took place. Forest slopes very steep, peat moorland hilltops.		1996	2157	87	1588	84	0.44	13.6	31/10	0.05	18/08	1.0	0.22	0.07
		1997	2253	91	1615	86	0.45	11.7	09/12	0.07	19/08	1.0	0.24	0.09
		1998	3411	138	2669	142	0.74	17.7	27/10	0.08	30/05	1.6	0.40	0.13
		1999	3145	127	2356	125	0.65	16.8	28/02	0.06	27/07	1.6	0.33	0.09
		2000	3442	139	2846	151	0.78	13.8	29/10	0.10	30/07	2.0	0.44	0.13
054025	**Dulas at Rhos-y-pentref** C.A: 52.7 km^2	**69..95**	**1300**		**846**		**1.41**	**38.5**	**18/10 1987**	**0.01**	**28/08 1995**	**3.7**	**0.73**	**0.04**
M.A: EA	Local No: 2025 Sens.: 22.5 B/full: 133.0m^3s^{-1}													
F.A.R: N	Level: 179m UE: <.01 FAI: 1.000													
Comment: Trapezoidal flume, 15.9m wide, with side contractions to 13.7m in critical section, between 1.5m wing walls. Structurefull discharge of 146 m^3s^{-1} should contain most flows. Shoals of shale fragments u/s need annual clearing and also block intake pipes; 3 separate intakes increase chances of maintaining reliable stage recording throughout the range. Natural catchment. # A high relief, wet and responsive catchment on Silurian shales and slates with Boulder Clay on valley sides. Pasture, forest and moorland.		1996	1144	88	779	92	1.30	19.6	11/02	0.01	18/08	3.2	0.71	0.02
		1997	1168	90	729	86	1.22	14.3	17/02	0.04	19/08	3.1	0.50	0.10
		1998	1637	126	1094	129	1.83	**47.0**	**27/10**	0.10	31/05	4.4	0.78	0.22
		1999	1586	122	1057	125	1.77	37.1	01/03	0.12	02/08	4.6	0.78	0.21
		2000	1747	134	1203	142	2.00	37.9	29/10	0.10	11/08	4.5	1.27	0.19
054081	**Clywedog at Bryntail** C.A: 49.0 km^2	**77..95**	**2004**		**1541**		**2.39**	**42.4**	**05/03 1985**	**0.01**	**24/05 1978**	**5.5**	**1.58**	**0.29**
M.A: EA	Local No: 2109 Sens.: S/full: 47.0m^3s^{-1}													
F.A.R: SR	Level: 212m UE: FAI:													
Comment: Flat V weir, 16m wide; 1:20 cross-slope, immediately below the reservoir. Installed for the purpose of measuring the compensation and regulation releases from Clywedog reservoir. Drawn down over winter months to flatten flood peaks. # Steep, wet catchment draining Ordovician and Silurian shales and slates. Substantially Drift free. Most tributaries afforested on valley sides.		1996	1652	82											
		1997	1691	84	1144	74	1.78	14.2	23/02	0.21	28/01	3.5	1.70	0.22
		1998	2565	128	2048	133	3.18	**61.0**	**06/03**	0.21	24/02	7.3	1.83	0.31
		1999	2452	122	1799	117	2.80	54.2	02/03	0.34	03/08	7.2	1.79	0.35
		2000	2707	135	2253	146	3.49	44.0	11/12	0.22	16/04	9.0	1.84	0.33
054014	**Severn at Abermule** C.A: 580.0 km^2	**62..95**	**1269**		**778**		**14.31**	**419.1**	**13/12 1964**	**0.41**	**20/09 1976**	**35.4**	**7.66**	**1.78**
M.A: EA	Local No: 2014 Sens.: 9.1 B/full: 225.0m^3s^{-1}													
F.A.R: SRI	Level: 83m UE: <.01 FAI: 0.975													
Comment: VA station in straight reach with rock/gravel bed. Control shifts during highest floods. Some weed growth but not severe. Some flow occurs through gravel bed, noticeable at low flows. Flow regime dominated by Clywedog releases when regulation in operation at low flows (from 1968). Significant abstraction for canal feeder at Penarth weir. # High relief headwaters but broad main channels of moderate slope with Boulder Clay and fluvial gravel; solid geology: Ordovician slates and shales. Responsive catchment.		1996	1125	89	629	81	11.53	144.8	12/02	1.12	10/07	25.6	6.23	1.80
		1997	1130	89	625	80	11.49	128.0	19/02	1.60	18/04	28.3	5.24	1.94
		1998	1637	129	1141	147	20.99	323.6	27/10	1.61	31/05	43.7	10.95	3.59
		1999	1598	126	981	126	18.04	238.6	01/03	0.45	05/09	47.2	9.12	1.23
		2000	1762	139	1167	150	21.40	239.6	29/10	1.39	13/09	47.3	13.82	2.58
054003	**Vyrnwy at Vyrnwy Reservoir** C.A: 94.3 km^2	**20..95**	*1932*		**703**		**2.10**	**99.0**	**09/12 1965**	**0.01**	**19/07 1979**	**5.0**	**0.60**	**0.46**
M.A: EA	Local No: 2003 Sens.:													
F.A.R: SR	Level: 226m UE: <.01 FAI: 0.752													
Comment: Rectangular notch, 24.4m long on the Vyrnwy River; stone cill overflow weirs on the rivers Cownwy and Marnant (whose flows are mostly diverted into the reservoir). Cownwy diversion has Flat V weir. Naturalised monthly record available from 1879, daily record from 1920. Direct supply to Liverpool. # Steep, very wet catchment draining Drift free, Silurian and Ordovician slates and shales.		1996	1669	86	266	38	0.79	3.8	02/12	0.18	09/11	2.5	0.42	0.27
		1997	1786	92	353	50	1.06	43.3	19/02	0.17	10/10	1.4	0.52	0.28
		1998	2530	131	1084	154	3.24	70.4	08/01	0.28	27/08	6.6	0.92	0.31
		1999	2349	122	979	139	2.93	61.8	15/01	0.28	26/10	7.1	0.60	0.49
		2000	2594	134	1290	183	3.85	77.6	29/10	**0.00**	**15/03**	9.7	0.68	0.29
054038	**Tanat at Llanyblodwel** C.A: 229.0 km^2	**73..95**	**1225**		**889**		**6.45**	**123.1**	**01/01 1991**	**0.09**	**07/09 1976**	**15.4**	**3.89**	**0.48**
M.A: EA	Local No: 2038 Sens.: 10.7													
F.A.R: EIN	Level: 77m UE: <.01 FAI: 0.996													
Comment: From Feb 1992 Crump profile Flat V (1:20) weir, 12.4m wide, 0.72m high wing walls, replaced VA station with natural rock step control approx. 150m d/s of cableway. Gravel bed. Right bank floodplain approx. 50m wide, partially crossed by cableway. Sewage effluent has insignificant effect upon flow regime. # High relief headwaters and broad bottomed valleys of moderate slope with Boulder Clay and fluvial gravel. Solid geology: Ordovician slates and shales. Moorland, forestry, pasture.		1996	1146	94	759	85	5.50	57.5	11/02	0.35	19/08	13.1	3.66	0.44
		1997	1212	99	732	82	5.32	62.4	19/02	0.53	19/08	15.1	2.44	0.74
		1998	1612	132	1154	130	8.38	100.7	08/01	0.93	22/08	19.4	4.15	1.20
		1999	1567	128	1159	130	8.41	82.2	15/01	0.44	31/07	22.4	4.76	0.72
		2000	1735	142	1373	154	9.95	**152.1**	**06/11**	1.04	12/08	22.1	5.95	1.35
054028	**Vyrnwy at Llanymynech** C.A: 778.0 km^2	**6 9..95**	**1332**		**839**		**20.71**	**409.3**	**06/08 1973**	**0.42**	**28/07 1984**	**48.7**	**11.66**	**2.03**
M.A: EA	Local No: 2028 Sens.: 8.6 B/full: 160.0m^3s^{-1}													
F.A.R: SRPI	Level: 62m UE: <.01 FAI: 0.971													
Comment: Velocity-area station, 35m wide, in a substantially straight reach with natural shoal control. Out-of-bank flows gauged from a cableway extension over the floodplain. Whole record reprocessed 2002. Three major PWS abstractions in the catchment have a substantial effect on the flow regime, notably the export to Liverpool from L. Vyrnwy. # Steep headwater streams and broad-bottomed valleys; storage in valley sands and gravels. Moorland, forestry and grazing.		1996	1162	87	675	80	16.60	175.2	12/02	1.49	22/09	37.5	10.97	2.11
		1997	1233	93	656	78	16.19	191.3	17/02	1.96	19/08	40.6	8.21	3.11
		1998	1681	126	1138	136	28.08	375.4	27/10	4.25	20/08	61.7	14.30	5.33
		1999	1644	123	1093	130	26.97	308.9	15/01	2.51	18/07	65.4	13.88	3.06
		2000	1827	137	1340	160	32.97	**451.4**	**30/10**	3.89	12/08	69.5	18.83	4.80
054005	**Severn at Montford** C.A: 2025.0 km^2	**53..95**	**1174**		**660**		**42.37**	**467.2**	**05/12 1960**	**1.98**	**10/05 1954**	**106.9**	**24.16**	**5.61**
M.A: EA	Local No: 2005 Sens.: 4.3 B/full: 220.0m^3s^{-1}													
F.A.R: SRPE	Level: 52m UE: <.01 FAI: 0.980													
Comment: VA station to 1994 when cross-path US installed to bankfull. Fully contained; since 1985 all floods can be gauged (earlier, rb only). Very prone to weed growth; considerable variations recorded in summer S-D relations. High flows from US and gauging need reconciling. Low flows significantly affected by reservoir and PWS. Limited series of naturalised flows available. # High relief headwaters. Valleys are broad bottomed with moderate slope and feature Boulder Clay, fluvial gravel and extensive washlands which slow response. Outcrop solid geology Ordovician and Silurian shales, grits and mudstones. Moorland, forestry, grazing, low grade agriculture.		1996	1011	86											
		1997	1048	89										
		1998	1439	123	876	133	56.23	276.5d	28/10	7.83	01/06	148.5	31.44	10.03
		1999	1432	122	834	126	53.53	333.8d	03/03	5.14	06/09	148.0	25.40	6.16
		2000	1583	135	1076	163	68.89	464.0d	31/10	8.08	13/08	158.5	45.00	9.98

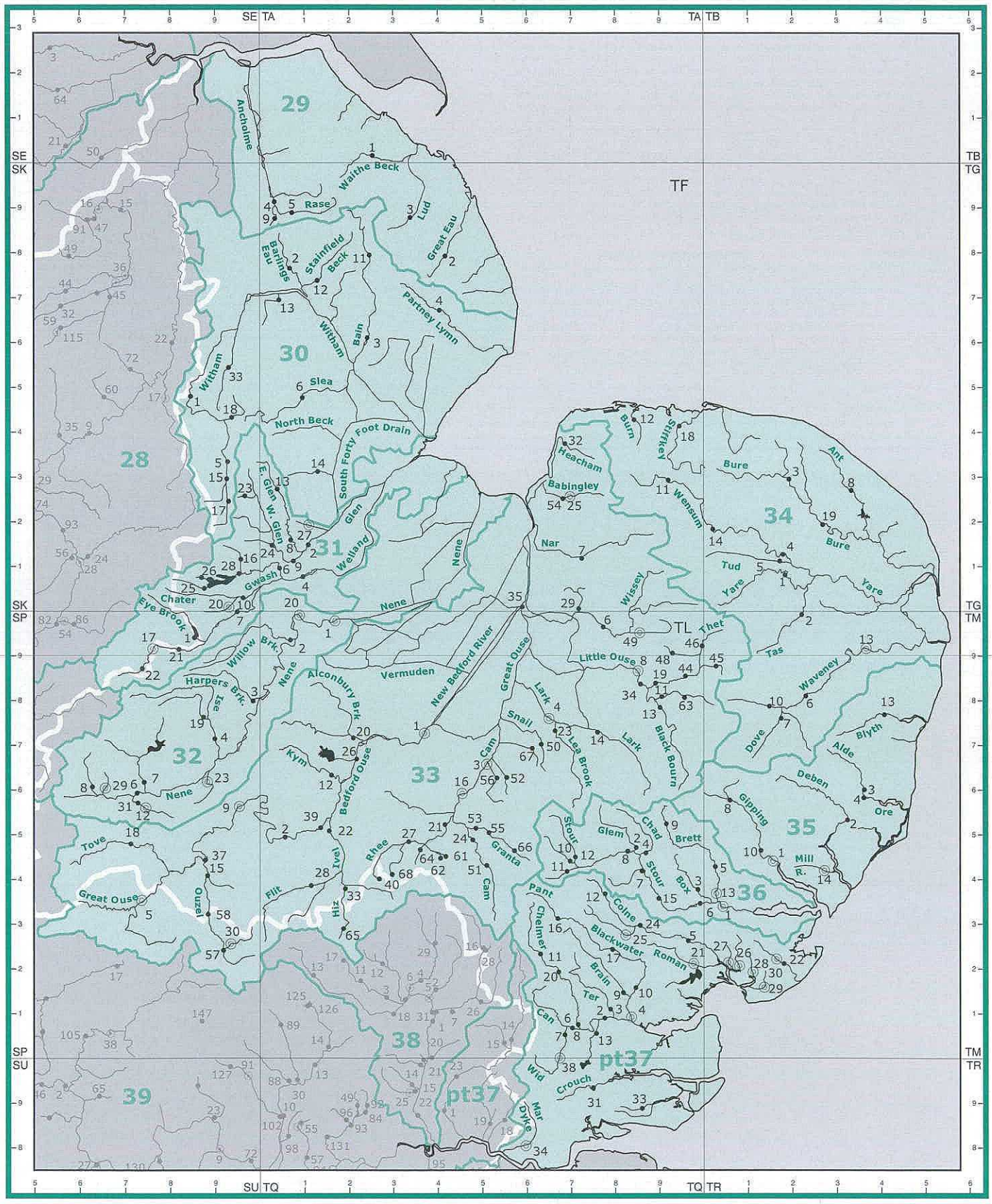
		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
054020	**Perry at Yeaton** C.A: 180.8 km^2	**63..95**	**757**		**280**		**1.61**	**17.7**	**07/02**	**0.16**	**25/08**	**3.4**	**1.06**	**0.42**
M.A: EA	Local No: 2020 Sens.: 13.1 B/full: 15.0m^3s^{-1}								**1990**		**1976**			
F.A.R: GEI	Level: 61m UE: <.01 FAI: 0.965													
Comment: Crump profile weir, 6m wide with (unused) crest tapping. Channel very prone to weed growth; may suffer from siltation u/s. All floods contained. Substantial gw abstraction has indirect effect. Effluent returns in catchment may have substantial effect at lowest flows. # River rises on Millstone Grit and traverses Sherwood Sandstone and Mercia Mudstone, although much complicated by glacial sand and gravel; some marshlands with artificial drainage.		1996	651	86	168	60	0.96	7.2	12/02	0.24	27/07	1.9	0.71	0.30
		1997	687	91	150	54	0.86	5.7	25/02	0.30	19/08	1.8	0.64	0.32
		1998	869	115	312	111	1.79	12.5	08/01	0.37	10/08	3.6	1.19	0.42
		1999	973	129	359	128	2.06	11.5	16/01	0.28	30/07	4.8	1.48	0.42
		2000	1014	134	456	163	2.61	16.5	06/11	0.48	22/07	5.8	1.67	0.57
054018	**Rea Brook at Hookagate** C.A: 178.0 km^2	**62..95**	**751**		**305**		**1.72**	**38.5**	**09/12**	**0.08**	**23/08**	**4.1**	**0.90**	**0.24**
M.A: EA	Local No: 2018 Sens.: 11.2 B/full: 24.5m^3s^{-1}								**1965**		**1976**			
F.A.R: N	Level: 65m UE: <.01 FAI: 1.000													
Comment: Model tested trapezoidal flume and flanking broad-crested weirs within vertical sidewalls 7.3m apart. Lb inundated at high flows but velocities low and rating extrapolation reasonable. All flows contained by d/s road bridge. Substantially natural catchment. Minor effects from sewage at lowest flows. # Broad, flat main channel flanked by steeply graded streams. Complex geology; s'sts and shales (Pre-Cambrian to Silurian) entirely covered by Boulder Clay and fluvio-glacial sand and gravel. Moorland and low grade agriculture.		1996	690	92	236	77	1.33	16.1	12/02	0.19	21/09	3.1	0.86	0.20
		1997	748	100	203	67	1.15	15.0	28/11	0.23	05/10	2.5	0.64	0.27
		1998	881	117	348	114	1.97	24.5	04/01	0.25	12/08	4.5	1.08	0.30
		1999	951	127	403	132	2.28	22.7	25/12	0.22	31/07	5.9	1.33	0.30
		2000	1059	141	515	169	2.90	45.2	06/11	0.37	13/09	6.5	1.57	0.45
054044	**Tern at Ternhill** C.A: 92.6 km^2	**72..95**	**735**		**286**		**0.84**	**21.8**	**11/02**	**0.26**	**26/08**	**1.4**	**0.69**	**0.41**
M.A: EA	Local No: 2044 Sens.: 9.1 S/full: 2.0m^3s^{-1}								**1977**		**1976**			
F.A.R: GEI	Level: 62m UE: .01 FAI: 0.953													
Comment: Rectangular notch 4m wide by 0.43m deep with side contractions. Cableway for high flows. Not yet out of bank. Significant ground and surface water abstractions in the catchment with effluent from Market Drayton. Shares a recorder hut with the adjacent Bailey Brook gauge. # Agricultural, low relief catchment, high baseflow from Bunter s'st and glacial sand and gravel. Boulder Clay typifies the right hand bank geology.		1996	598	81	188	66	0.55	3.3	20/12	0.28	01/08	0.8	0.50	0.31
		1997	734	100	208	73	0.61	3.7	27/06	0.33	09/06	0.9	0.49	0.37
		1998	863	117	309	108	0.91	12.1	23/10	0.43	20/08	1.5	0.71	0.47
		1999	955	130	346	121	1.02	7.2	02/10	0.41	31/07	1.7	0.87	0.47
		2000	1026	140	411	144	1.20	18.4	06/11	0.51	25/08	2.2	0.88	0.55
054052	**Bailey Brook at Ternhill** C.A: 34.4 km^2	**70..95**	**689**		**417**		**0.46**	**15.1**	**14/08**	**0.04**	**09/07**	**0.9**	**0.31**	**0.12**
M.A: EA	Local No: 2052 Sens.: 18.2								**1971**		**1976**			
F.A.R: GEN	Level: 62m UE: <.01 FAI: 0.983													
Comment: Rectangular notch, 1m wide, 0.63m deep with side contractions, which act as broad-crested weirs above notch full. Stays in bank. Shares a recorder hut with the gauge on the adjacent R. Tern. Confluence 10m d/s. Minimal flow augmentation from WRW. # Small, low relief catchment instrumented for monitoring the Shropshire Groundwater Scheme. Solid geology Triassic s'sts but extensively overlain by Boulder Clay and glacial sand and gravel. High baseflow, slow response.		1996	604	88	166	40	0.18	2.5	19/12	0.06	05/08	0.3	0.16	0.08
		1997	667	97	181	43	0.20	2.8	28/12	0.08	08/08	0.3	0.15	0.09
		1998	810	118	364	87	0.40	3.9	23/10	0.12	17/08	0.8	0.28	0.14
		1999	903	131	410	98	0.45	2.5	01/10	0.12	31/07	0.9	0.37	0.14
		2000	954	138	457	110	0.50	7.5	06/11	0.14	29/08	1.0	0.34	0.15
054041	**Tern at Eaton On Tern** C.A: 192.0 km^2	**72..95**	**712**		**276**		**1.68**	**20.0**	**28/01**	**0.34**	**02/07**	**3.0**	**1.30**	**0.69**
M.A: EA	Local No: 2041 Sens.: 9.3 B/full: 13.0m^3s^{-1}								**1990**		**1976**			
F.A.R: GEI	Level: 54m UE: .01 FAI: 0.968													
Comment: Two-bay Crump profile weir with identical crest heights, 6m total width, with crest tapping, set into old mill sluices. U/s cableway. Significant gw abstractions. Part of Shropshire Groundwater Scheme network. Agricultural and PWS abstractions balance effluent returns. # Agricultural, low relief catchment. Outcrop Triassic and Coal Measures s'sts near the gauge; intermittent Boulder Clay and glacial sand and gravel become dominant over the upper catchment.		1996	588	83	161	58	0.98	6.9	20/12	0.41	05/08	1.5	0.84	0.49
		1997	700	98	176	64	1.07	8.2	28/12	0.50	03/10	1.6	0.85	0.57
		1998	824	116	303	110	1.85	18.0	24/10	0.64	19/08	3.1	1.32	0.75
		1999	919	129	354	128	2.16	15.9	03/10	0.62	31/07	3.8	1.69	0.75
		2000	987	139	402	146	2.44	23.1	06/11	0.85	25/08	4.5	1.65	0.91
054087	**Allford Brook at Childs Ercall** C.A: 4.7 km^2	**73..95**	**654**		**101**		**0.01**	**0.3**	**27/01**	**0.00**	**01/01**	**0.0**	**0.01**	
M.A: EA	Local No: 2151 Sens.:								**1990**		**1991**			
F.A.R: GI	Level: m UE: FAI:													
Comment: 90 degree Vee notch with side contractions set in an access chamber to a culverted section. Standard and tipping bucket raingauges adjacent. Close to a Shropshire GW scheme abstraction point. # Agricultural catchment on Sherwood sandstone and glacial sands and gravels.		1996	533	80										
		1997	656	99										
		1998	723	109	123	122	0.02	*0.1*	*08/01*	>0.00	08/08	0.0	0.01	
		1999	844	127	160	158	0.02	0.2	06/01	>0.00	24/07	0.0	>0.00	>0.00
		2000	916	138	215	213	0.03	**0.3**	**06/11**	>0.00	19/08	0.1	0.02	0.01
054099	**Coley Brook at Coley Mill** C.A: 37.3 km^2													
M.A: EA	Local No: Sens.:													
F.A.R: PG	Level: 69m UE: FAI:													
Comment: Rectangular thin plate weir 1.9m wide with concrete side contractions, set in existing brick lined channel. Non standard approach (sharp bend u/s). Weir drowns at high flows. Flows affected by u/s PWS abstractions and spray irrigation. High baseflow component.		1996												
		1997	718		172		0.20	1.9	27/06	0.08	10/06	0.3	0.16	0.11
		1998	718		306		0.36	2.1	05/01	0.09	09/08	0.8	0.23	0.12
		1999	927		434		0.51	3.1	25/12	0.11	28/07	1.2	0.31	0.14
		2000	965		421		0.50	4.8	06/11	0.16	26/07	0.9	0.30	0.17
054040	**Meese at Tibberton** C.A: 167.8 km^2	**73..95**	**692**		**225**		**1.20**	**8.2**	**31/12**	**0.18**	**27/08**	**2.1**	**0.98**	**0.46**
M.A: EA	Local No: 2040 Sens.: 13.7								**1981**		**1976**			
F.A.R: GEI	Level: 56m UE: <.01 FAI: 0.935													
Comment: Crump profile weir, 6m wide, for the Shropshire Groundwater Scheme. Indirectly affected by large PWS gw abstractions; otherwise spray irrigation and canal impoundment have moderate effect. # Agricultural, very low relief catchment with high baseflow component. Drains outcrop Sherwood Sandstone; intermittent Boulder Clay and glacial sand and gravel.		1996	560	81	130	58	0.69	2.7	20/12	0.23	05/08	1.1	0.65	0.29
		1997	709	102	143	64	0.76	3.3	28/06	0.30	09/06	1.1	0.65	0.41
		1998	747	108	205	91	1.09	4.3	05/01	0.42	13/08	2.0	0.87	0.49
		1999	895	129	253	112	1.35	4.4	28/01	0.45	28/07	2.1	1.25	0.58
		2000	958	138	298	132	1.58	9.6	06/11	0.58	23/07	2.8	1.16	0.67
054060	**Potford Brook at Sandyford Bridge** C.A: 25.0 km^2	**72..95**	**670**		**180**		**0.14**	**7.4**	**27/01**	**0.02**	**11/07**	**0.2**	**0.10**	**0.05**
M.A: EA	Local No: 2060 Sens.: 30.0								**1990**		**1976**			
F.A.R: G	Level: 56m UE: <.01 FAI: 1.000													
Comment: Prefabricated Flat V Crump profile weir, initially installed for the Shropshire Groundwater investigation. Repositioned 1987 to avoid backing up. Low flows may be significantly affected when the Severn augmentation is in operation. Unresponsive catchment. # Flat catchment on mixed geology: Sherwood S'st, Boulder Clay and glacial sands and gravel.		1996	560	84	94	52	0.07	0.6	12/02	0.03	20/09	0.1	0.07	0.03
		1997	652	97	76	42	0.06	0.6	28/12	0.03	09/06	0.1	0.05	0.03
		1998	745	111	148	82	0.12	1.0	08/01	0.05	19/08	0.2	0.09	0.05
		1999	840	125	176	98	0.14	0.9	01/10	0.05	31/07	0.2	0.12	0.06
		2000	911	136	264	147	0.21	**8.3**	**05/11**	0.07	25/08	0.3	0.13	0.07
054094	**Strine at Crudgington** C.A: 134.0 km^2	**82..95**	**662**		**165**		**0.70**	**8.4**	**07/02**	**0.12**	**23/07**	**1.3**	**0.46**	**0.19**
M.A: EA	Local No: 2170 Sens.:								**1990**		**1995**			
F.A.R: GEI	Level: m UE: FAI:													
Comment: Electromagnetic gauge, using a bubbler device for level measurement, in trapezoidal channel. Very low velocities experienced. Replaced poor weed-affected open channel site in 1981. Early record not available. Substantial modification to flow regime from WRW discharges. # Very flat catchment draining Weald Moors. Geology: Sherwood S'st overlain by various superficial deposits. Newport in headwaters. Includes part of Telford.		1996	537	81											
		1997	683	103	97	59	0.41	3.1	29/11	0.13	09/06	0.68	0.30	0.19
		1998	692	105	143	87	0.61	4.6	04/01	0.21	18/07	1.1	0.46	0.24
		1999	877	132	190	115	0.81	4.4	24/12	0.22	12/07	1.6	0.63	0.27
		2000	924	140	240	145	1.02	6.2	07/12	0.32	24/08	2.1	0.70	0.35
054016	**Roden at Rodington** C.A: 259.0 km^2	**61..95**	**684**		**238**		**1.96**	**30.6**	**02/07**	**0.18**	**26/08**	**4.3**	**1.24**	**0.43**
M.A: EA	Local No: 2016 Sens.: 7.5 B/full: 18.0m^3s^{-1}								**1968**		**1976**			
F.A.R: GI	Level: 48m UE: .01 FAI: 0.984													
Comment: Model tested trapezoidal flume and flanking broad-crested weirs within vertical sidewalls 7.3m apart. Tapping to measure tailwater levels. Channel prone to weed growth. Net effect of general gw abstractions and returns insignificant; minor seasonal influence from spray irrigation. Shropshire GW scheme affects (augments) low flows when in operation. # Unresponsive rural catchment of subdued relief, underlain by sandstones, marls and clays of Carboniferous through to Liassic age, blanketed extensively by Boulder Clay and morainic sand and gravel.		1996	587	86	126	53	1.03	7.5	20/12	0.18	22/07	1.9	0.79	0.25
		1997	639	93	124	52	1.02	8.4	29/12	0.37	03/10	1.9	0.76	0.40
		1998	772	113	260	109	2.13	14.9	05/01	0.37	19/08	4.8	1.40	0.45
		1999	889	130	311	131	2.55	16.7	03/10	0.31	31/07	5.4	1.84	0.42
		2000	942	138	390	164	3.20	22.2	06/11	0.60	30/08	6.9	1.83	0.65

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
054012	**Tern at Walcot** C.A: 852.0 km^2	60..95	702		256		6.90	60.0	28/01 1990	0.94	26/08 1976	13.3	5.01	2.33
M.A: EA	Local No: 2012 Sens.: 2.8 B/full: 26.0m^3s^{-1}													
F.A.R: GEI	Level: 45m UE: .02 FAI: 0.960													
Comment: Initially rated section (1959-76), then gabion control (1976-1978), both very prone to weed growth leading to unstable S-D relation; now Flat V weir 15m wide. Automatic system for flushing crest tapping chamber. Bypass channel: can be drained to enable work on weir, producing low or zero flows. Regional gw pumping for PWS and Severn regulation. Industrial effluent from Wellington and Newport; abstractions for spray irrigation. Net result only moderate. # Predominantly agricultural, low relief catchment. Mixed glacial geology overlying Triassic series.		1996	571	81	148	58	3.99	28.1	20/12	1.38	27/07	6.5	3.38	1.57
		1997	675	96	166	65	4.48	27.0	29/12	1.80	09/06	7.4	3.35	2.19
		1998	759	108	278	109	7.52	42.6	05/01	2.25	13/08	15.5	5.00	2.62
		1999	890	127	342	134	9.25	47.9	03/10	2.08	31/07	19.6	6.89	2.69
		2000	947	135	357	139	9.62	35.7	07/11	3.21	13/09	19.4	6.68	3.37
054095	**Severn at Buildwas** C.A: 3717.0 km^2	84..95	959		501		59.01	520.8	02/06 1992	8.97	14/10 1989	154.0	32.13	11.48
M.A: EA	Local No: 2134 Sens.: B/full: 285.0m^3s^{-1}													
F.A.R: SRPGEI	Level: 36m UE: FAI:													
Comment: Multiple US cross-configuration gauging station. Fully contained by Buildwas Bridge. Substantial modifications of lowest flows by Clywedog and Vyrnwy Reservoirs and Shropshire Groundwater Scheme; otherwise artificial effects modest. # Diverse catchment: moorland and forestry in wet headwaters (Palaeozoic formations), mixed farming and some towns in drier north and east - where Drift cover can be substantial.		1996	822	86										
		1997	883	92	371	74	43.72	214.1	27/02	11.76	05/10	104.8	24.87	13.00
		1998	1145	119	641	128	75.53	450.2	29/10	11.42	21/08	187.5	42.77	15.45
		1999	1189	124	646	129	76.11	365.7	04/03	10.49	12/07	200.9	44.17	12.01
		2000	1304	136	794	158	93.27	638.9	01/11	13.77	13/08	207.4	62.48	16.39
054046	**Worfe at Cosford** C.A: 54.9 km^2	75..95	704		110		0.19	9.6	10/01 1986	>0.00	25/06 1992	0.4	0.12	0.04
M.A: EA	Local No: 2046 Sens.: 47.5 B/full: 3.5m^3s^{-1}													
F.A.R: GI	Level: 60m UE: FAI:													
Comment: Originally a rectangular weir, 3.05m wide, with side contractions. Suffered from substantial leakage, rebuilt in 1990: weir 4m wide. Station installed to monitor affects of PWS abstractions. Affected by Shropshire Groundwater Scheme. Substantial impact from gw abstractions for PWS (Cosing Stream), and irrigation. # Predominantly agricultural, low relief catchment draining Sherwood S'st; intermittent Boulder Clay and glacial sand and gravel cover. Contains Shifnal, Albighton and east of Madely.		1996	562	80	44	40	0.08	0.4	19/12	0.01	20/07	0.1	0.06	0.02
		1997	722	103	42	38	0.07	1.4	26/06	0.00	04/06	0.1	0.04	0.01
		1998	750	107	100	91	0.17	1.8	10/04	0.02	13/08	0.4	0.11	0.03
		1999	947	135	165	150	0.29	2.6	25/12	0.04	27/07	0.6	0.21	0.06
		2000	961	137	228	207	0.40	7.4	06/11	0.07	25/08	0.8	0.23	0.09
054024	**Worfe at Burcote** C.A: 258.0 km^2	69..95	687		143		1.17	16.1	25/05 1969	0.05	14/08 1976	2.1	0.89	0.33
M.A: EA	Local No: 2024 Sens.: 13.5 B/full: 16.0m^3s^{-1}													
F.A.R: PGEI	Level: 33m UE: .03 FAI: 0.954													
Comment: Crump profile weir, 5.5m wide, with crest tapping. Flows generally contained. Substantial impact from groundwater abstractions for PWS, industry and irrigation; surface abstraction for PWS and spray irrigation. # Predominantly agricultural, low relief catchment draining Triassic sandstones; intermittent Boulder Clay and glacial sand and gravel cover. Urban restricted to 4 small towns and some villages.		1996	545	79	84	59	0.69	3.3	09/01	0.17	21/07	1.2	0.61	0.23
		1997	699	102	80	56	0.65	5.4	28/06	0.13	05/06	1.1	0.49	0.23
		1998	730	106	135	94	1.10	5.8	05/01	0.22	11/08	2.1	0.84	0.32
		1999	917	133	191	134	1.56	7.4	26/12	0.32	31/07	2.9	1.29	0.47
		2000	941	137	241	169	1.97	18.8	06/11	0.51	20/07	3.9	1.27	0.56
054034	**Dowles Brook at Oak Cottage, Dowles** C.A: 40.8 km^2	71..95	732		297		0.38	21.6	10/06 1993	0.01	23/08 1976	1.0	0.16	0.03
M.A: EA	Local No: 2034 Sens.: 33.3 S/full: 10.0m^3s^{-1}													
F.A.R: N	Level: 24m UE: <.01 FAI: 0.999													
Comment: Flat V Crump profile weir 6m wide, with a cableway to allow high flow gauging. Flood banks on a 36m wide floodplain should contain most flows but bypassing does occur - high range of dubious quality. No significant abstractions or returns but regime affected by sluice operation. # The catchment is substantially Drift free, situated on sandstones and marls of Upper Carboniferous age. The river bisects the Wyre Forest; all but the headwaters are afforested.		1996	626	86	211	71	0.27	6.2	08/01	0.02	05/08	0.6	0.12	0.03
		1997	721	98	208	70	0.27	8.8	26/06	0.02	16/08	0.6	0.09	0.03
		1998	801	109	295	99	0.38	8.2	08/01	0.02	31/08	1.0	0.15	0.02
		1999	914	125	383	129	0.50	11.3	15/01	0.02	30/07	1.2	0.25	0.04
		2000	966	132	458	154	0.59	18.5	07/12	0.02	12/09	1.6	0.20	0.03
054001	**Severn at Bewdley** C.A: 4325.0 km^2	21..95	919		449		61.61	637.1d	21/03 1947	5.99	04/09 1976	148.5	36.97	10.79
M.A: EA	Local No: 2001 Sens.: 3.3 B/full: 420.0m^3s^{-1}													
F.A.R: SRPGEI	Level: 17m UE: .01 FAI: 0.975													
Comment: 20-path US gauge. VA station with rock control prior to 1989. Peak flows available from 1972. Stage monitoring site relocated in 1950 and 1968; lowest flows reprocessed in 1976 for 1921-68. Pre-1968 records of modest precision. Significant exports for PWS and power generation; minimum flow maintained by releases from Clywedog and Vyrnwy Reservoirs and Shropshire g/w. Naturalised flow series, from 1968 only, accommodates major usages other than g/w support. Some earlier records adjusted for Vyrnwy (1966-7). # Diverse catchment; wet western 50% from impermeable Palaeozoic rocks and river gravels; drier northern 50% from Drift covered Carboniferous to Liassic sandstones and marls. Moorland, forestry, mixed farming.		1996	789	86	314	70	42.92	228.0	12/02	8.16	17/07	93.6	30.85	9.48
		1997	860	94	301	67	41.29	207.2	26/02	9.69	12/08	99.0	22.05	10.43
		1998	1088	118	530	118	72.66	412.0	30/10	11.21	21/08	172.3	41.65	13.89
		1999	1154	126	550	122	75.40	338.0	18/01	9.46	11/07	193.2	46.23	10.71
		2000	1256	137	683	152	93.44	551.7	02/11	13.68	12/08	205.4	63.91	16.14
054063	**Stour at Prestwood Hospital** C.A: 89.9 km^2	72..95	725		399		1.14	41.2	14/06 1977	0.36	18/08 1975	1.9	0.88	0.56
M.A: EA	Local No: 2063 Sens.:													
F.A.R: GEI	Level: 51m UE: FAI:													
Comment: Original secondary velocity-area station replaced in 1995 with a Flat V Crump profile weir, 11m wide, 1:20 cross slopes, wing walls at 0.9m in a good reach. Contained on rb, possibly bypassed on lb behind the hut. Gw for PWS significantly augments low flows as effluent. Smestow Brook tributary more rural; can give rise to responsive hydrographs.		1996	585	81										
		1997	708	98	335	84	0.95	38.6	26/06	0.45	01/06	1.5	0.64	0.48
		1998	826	114	397	99	1.13	27.9	25/12	0.45	09/08	2.0	0.81	0.49
		1999	923	127	437	110	1.24	50.5	08/08	0.23	13/11	2.1	0.79	0.49
		2000	944	130	425	107	1.21	38.8	05/11	0.28	28/06	2.5	0.69	0.33
054006	**Stour at Callows Lane, Kidderminster** C.A: 324.0 km^2	53..95	706		275		2.82	81.6	27/03 1955	0.55	25/08 1976	4.7	2.30	1.29
M.A: EA	Local No: 2167 Sens.: 6.2 B/full: 40.0m^3s^{-1}													
F.A.R: EI	Level: 30m UE: .15 FAI: 0.986													
Comment: Original V-A station in formalised trapezoidal channel; variable, weed affected low flows; out-of-bank flows estimated. US gauge at a new site operational from Jul 1990. Gw pumping for PWS and industry leads to substantial augmentation from sewage and industrial effluents. # Low relief, 20% urbanised. Higher ground on flanks of river drain marls and s'st (Upper Coal Measures) but a faulted trough of Sherwood Sandstone is the major feature. Some Boulder Clay and valley gravel.		1996	563	80										
		1997	687	97	207	75	2.13	19.0	27/06	1.04	03/06	3.6	1.63	1.15
		1998	784	111	244	89	2.51	16.2	25/12	0.96	13/08	4.5	1.91	1.08
		1999	920	130	314	114	3.22	18.4	02/10	1.18	31/07	5.7	2.52	1.36
		2000	925	131	312	113	3.19	22.0	08/12	1.03	12/09	6.0	2.24	1.12
054096	**Hadley Brook at Wards Bridge** C.A: 53.4 km^2	90..95	656		241		0.41	13.7	17/01 1995	0.04	29/06 1992	0.7	0.18	0.07
M.A: EA	Local No: 2193 Sens.:													
F.A.R: RPG	Level: 22m UE: FAI:													
Comment: Crump profile Flat V (1:10) weir set in low 0.5m vertical wingwalls. Straight approach. Reasonably responsive; out of structure flows could be gauged from an u/s bridge. Monitors compensation flows from a compensation borehole as substantial gw abstraction in the catchment. # Low to moderate relief catchment principally on Mercia Mudstone; Headwaters have Sherwood S'st outcrops. Wholly rural with mixed farming.		1996	537	82	128	53	0.22	4.1	09/02	0.05	18/09	0.4	0.14	0.07
		1997	648	99	108	45	0.18	7.5	28/11	0.06	04/08	0.3	0.11	0.06
		1998	733	112	272	113	0.46	11.8	26/12	0.06	11/08	0.7	0.20	0.08
		1999	840	128	368	153	0.62	11.4	25/12	0.07	31/07	0.9	0.27	0.10
		2000	904	138	536	222	0.91	14.6	07/12	0.10	07/09	2.3	0.28	0.11
054011	**Salwarpe at Harford Hill** C.A: 184.0 km^2	61..95	674		227		1.32	105.6	14/01 1968	0.16	24/08 1976	2.4	0.93	0.40
M.A: EA	Local No: 2011 Sens.: 12.9 B/full: 34.0m^3s^{-1}													
F.A.R: GEI	Level: 19m UE: .05 FAI: 0.992													
Comment: Original VA station with bed of stone blocks replaced in 1992 by Flat V Crump profile weir, 7m wide, cross slopes 1:20, wing walls at 0.7m in reasonably straight reach. Additional cableway. Fully contained. VA station very prone to weed growth, summer corrections made: low flows of variable quality. Gauged to bankfull only. Gw for PWS leads to significant augmentation from sewage; spray irrigation abstraction seasonally significant. # Generally low relief catchment, draining Clent and Lickey hills. Contains Bromsgrove and Droitwich. Virtually Drift free, predominant geology: Mercia Mudstone in lower reaches. Mainly agricultural.		1996	549	81	142	63	0.83	6.6	09/02	0.31	18/09	1.4	0.62	0.34
		1997	655	97	117	52	0.68	9.2	28/11	0.29	10/08	1.2	0.47	0.32
		1998	758	112	224	99	1.31	18.0	09/04	0.35	12/08	2.4	0.85	0.40
		1999	867	129	288	127	1.68	19.8	02/06	0.39	28/07	3.2	1.04	0.49
		2000	927	138	342	151	1.99	27.2	07/12	0.47	25/08	4.1	1.15	0.55

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
054008	**Teme at Tenbury** C.A: 1134.4 km^2	**56..95**	**856**		**397**		**14.29**	**266.5**	**04/12 1960**	**0.65**	**27/08 1976**	**34.5**	**8.34**	**1.52**
M.A: EA	Local No: 2008 Sens.: 6.4 B/full: 200.0m^3s^{-1}													
F.A.R: EN	Level: 48m UE: <.01 FAI: 0.995													
Comment: Velocity-area station with gravel control. U/s shoaling may render low flow rating variable from year to year. Rarely out of bank. Adjustments small and dispersed; natural catchment. # Left bank characterised by high relief hills and broad valleys. Steep and narrow on right bank. Geology: mainly Palaeozoic sediments with Pre-Cambrian crystalline rocks of the Longmynd. Relatively Drift free; some valley gravel and Boulder Clay in the lower reaches. Forestry, grazing.		1996	761	89	309	78	11.10	97.4	12/02	1.19	12/10	24.5	7.21	1.24
		1997	802	94	274	69	9.87	86.9	29/11	1.67	05/10	23.5	4.88	1.96
		1998	984	115	507	128	18.24	149.7	28/10	1.91	31/08	50.0	9.55	2.32
		1999	1058	124	568	143	20.44	149.3	25/12	2.03	31/07	50.8	12.33	2.48
		2000	1141	133	664	167	23.83	212.0	30/10	2.01	13/09	57.9	12.36	2.51
054029	**Teme at Knightsford Bridge** C.A: 1480.0 km^2	**70..95**	**828**		**366**		**17.19**	**284.6**	**28/12 1979**	**0.72**	**27/08 1976**	**40.5**	**9.47**	**1.95**
M.A: EA	Local No: 2029 Sens.: 20.2 B/full: 190.0m^3s^{-1}													
F.A.R: N	Level: 21m UE: <.01 FAI: 0.995													
Comment: Velocity-area station. Gravel control affected by weed growth at low flows. Training banks contain higher flows. Cableway for full range calibration. PWS abstractions and sewage returns insignificant. Natural catchment. Construction of a Flat V: missing data Nov and Dec 1998. # Left bank: high relief hills and broad valleys. Right bank: steep and narrow. Geology mainly Palaeozoic sediments with Pre-Cambrian crystalline rocks of the Longmynd. Relatively drift free; some valley gravel and Boulder Clay in lower reaches. Moorland,forestry, grazing.		1996	738	89	298	81	13.93	133.7	09/01	1.08	13/10	29.9	9.20	1.15
		1997	792	96	248	68	11.64	117.9	29/11	1.51	06/10	26.2	6.06	1.99
		1998	951	115										
		1999	1031	125	509	139	23.90	151.1	25/12	2.61	31/07	55.1	14.32	3.18
		2000	1115	135	604	165	28.26	158.9	08/12	2.65	13/09	70.1	14.78	3.42
054032	**Severn at Saxons Lode** C.A: 6850.0 km^2	**70..95**	**863**		**395**		**85.89**	**505.4**	**11/02 1977**	**7.20**	**23/08 1976**	**216.9**	**53.24**	**15.11**
M.A: EA	Local No: 2032 Sens.: 10.2 B/full: 340.0m^3s^{-1}													
F.A.R: SRPGEI	Level: 8m UE: .02 FAI: 0.982													
Comment: Originally velocity-area station between abutments of demolished railway bridge. Multipath US gauge from 1987. High flows mostly contained by embankments to the bridge but significant bypassing at the highest flows. Affected by high tides and tidal gates on R. Avon at Tewkesbury. Substantial modifications to flow owing to PWS exports, and effluent returns (chiefly the R. Stour and Worcester). # Very large diverse catchment, broad flood peaks. Land use mainly agriculture and forestry, with subordinate industrial development in the east.		1996	741	86	294	74	63.75	356.5	13/02	11.59	17/07	139.1	47.80	13.45
		1997	818	95	277	70	60.24	306.7	29/11	13.32	06/10	149.6	33.75	15.16
		1998	1009	117	477	121	103.72	427.1	31/10	15.42	22/08	263.5	61.43	20.85
		1999	1086	126	507	128	110.12	387.7	17/01	13.36	24/07	284.1	69.35	16.77
		2000	1174	136	579	147	125.32	503.8d	13/12	18.54	13/09	283.1	86.70	22.00
054019	**Avon at Stareton** C.A: 347.0 km^2	**62..95**	**667**		**231**		**2.54**	**71.4**	**11/07 1968**	**0.15**	**17/08 1976**	**5.8**	**1.33**	**0.47**
M.A: EA	Local No: 2019 Sens.: 14.5 B/full: 33.5m^3s^{-1}													
F.A.R: SEI	Level: 55m UE: .03 FAI: 0.954													
Comment: Crump profile weir, 7.3m wide with crest tapping. Current metering from footbridge u/s. Highest floods overtop right bank and follow old river channel. Early record to 1971 had Coventry sewage outfall diverted through station. Augmentation by gw pumping and surface transfers. Moderate influence from abstractions and returns. # Predominantly agricultural, low relief catchment, contains Rugby. Wide covering of superficial deposits on higher ground. Geology in lower reaches is argillaceous rock of Lias and Keuper Marl.		1996	495	74	122	53	1.34	12.2	13/02	0.38	19/07	2.5	0.84	0.43
		1997	655	98	126	55	1.39	14.5	30/11	0.35	12/08	2.8	0.82	0.45
		1998	751	113	278	120	3.06	**84.2**	**10/04**	0.39	10/08	7.1	1.36	0.49
		1999	776	116	287	124	3.16	37.3	16/01	0.45	01/08	7.8	1.79	0.55
		2000	847	127	358	155	3.92	56.4	06/11	0.48	12/08	9.9	2.11	0.56
054004	**Sowe at Stoneleigh** C.A: 262.0 km^2	**52..95**	**682**		**362**		**3.01**	**54.7**	**30/12 1981**	**0.51**	**30/07 1961**	**5.4**	**2.11**	**1.09**
M.A: EA	Local No: 2004 Sens.: 5.3 B/full: 55.0m^3s^{-1}													
F.A.R: GEI	Level: 55m UE: .13 FAI: 0.982													
Comment: Up to 1979 two humped invert flumes, total width 7.16m, and an overflow weir at 1.45m measured discharge. Rating dubious when overflow weir in operation. Since 1979 compound Crump profile weir with crest tapping. Prone to weed growth. Gw pumping, bulk imports and proximity to Coventry result in low flows dominated by sewage effluent. # Substantially urbanised catchment. W half on outcrop Coal Measures; E half Mercia Mudstone Group overlain by Boulder Clay and glacial sand and gravel.		1996	498	73	276	76	2.28	16.4	20/08	1.26	18/08	3.6	1.83	1.37
		1997	628	92	274	76	2.27	23.1	08/10	1.13	17/08	3.8	1.68	1.28
		1998	778	114	437	121	3.63	45.5	10/04	1.34	22/09	6.6	2.40	1.50
		1999	794	116	451	125	3.75	**58.1**	**08/08**	1.39	31/07	7.0	2.62	1.46
		2000	856	126	517	143	4.28	47.6	30/10	1.43	12/08	9.3	2.72	1.55
054050	**Leam at Eathorpe** C.A: 300.0 km^2	**87-95**	**649**		**140**		**1.33**	**60.9**	**26/09 1992**	**0.09**	**24/09 1994**	**3.0**	**0.46**	**0.25**
M.A: EA	Local No: 2050 Sens.: B/full: 6.5m^3s^{-1}													
F.A.R: P	Level: 57m UE: FAI:													
Comment: Side-contracted central low flow flume, flanked by broad crested weirs in a straight reach. Exceeds bankfull but not bypassed. Flashy response. Rated by model test and c/m. Flow regime dominated by the operation of Draycote Reservoir via the Eathorpe intake approx. 100m u/s - abstraction and support. Important flow forecasting site. # Low relief catchment. Mercia Mudstone in the lower catchment is overlain by river terraces, otherwise Lower Lias clays and silts. The north has abundant glacial sands and gravels. Wholly rural apart from south Rugby. Mixed farming.		1996	468	72	46	33	0.44	7.3	12/02	0.17	25/12	0.6	0.29	0.22
		1997	616	95	66	47	0.62	10.4	29/11	0.18	10/03	1.2	0.30	0.22
		1998	762	117	206	147	1.96	**116.2**	**09/04**	0.20	31/08	4.4	0.65	0.22
		1999	778	120	240	171	2.28	33.4	24/12	0.23	26/07	5.2	0.94	0.31
		2000	819	126	268	191	2.54	40.6	30/10	0.22	24/08	6.5	0.96	0.29
054049	**Leam at Princes Drive Weir** C.A: 362.0 km^2	**79..95**	**664**		**189**		**2.17**	**53.5**	**30/12 1981**	**0.05**	**11/07 1984**	**4.9**	**0.98**	**0.29**
M.A: EA	Local No: 2049 Sens.: 16.1													
F.A.R: SRPGE	Level: 46m UE: FAI:													
Comment: Up to 1979 rectangular thin-plate weir 4.7m wide, set in a 32.9m wide curved, broad-crested weir. Record poor, high flows unreliable. Since 1979 compound rectangular thin-plate weir has led to improved data. Station very important for monitoring PWS abstractions on the Leam and to measure releases from Draycote pumped storage reservoir; imports of water and gw pumping; substantial modification of flow regime. Some naturalised data from 1989. # Agricultural catchment of low relief, substantially Drift free. Lower fifth of catchment drains Mercia Mdstn; the remainder underlain by Liassic argillites.		1996	466	70	56	30	0.64	12.7	13/02	0.22	02/09	0.7	0.35	0.25
		1997	613	92	64	34	0.73	13.5	29/11	0.19	07/10	1.7	0.32	0.23
		1998	762	115	248	131	2.84	**217.1**	**10/04**	0.22	28/02	6.3	0.94	0.31
		1999	780	117	259	137	2.97	36.8	25/12	0.23	26/07	7.4	1.47	0.37
		2000	824	124	292	154	3.34	40.8	31/10	0.23	30/08	8.3	1.60	0.38
054048	**Dene at Wellesbourne** C.A: 102.0 km^2	**76..95**	**641**		**193**		**0.62**	**31.7**	**27/12 1979**	**0.03**	**11/08 1976**	**1.5**	**0.28**	**0.06**
M.A: EA	Local No: 2048 Sens.: B/full: 27.0m^3s^{-1}													
F.A.R: EI	Level: 41m UE: FAI:													
Comment: Flat V Crump profile weir, 7.97m wide; cross-slope 1:20, large d/s fall, all flows contained. Moderate influence from effluent discharges and seasonal spray irrigation. # Pre-dominantly agricultural catchment draining Edge Hill. Some Boulder Clay to the east, but generally argillaceous rocks of the Liassic series are at outcrop.		1996	435	68	78	40	0.25	3.6	09/01	0.04	16/09	0.5	0.12	0.05
		1997	566	88	57	30	0.19	3.3	28/11	0.04	28/07	0.4	0.09	0.05
		1998	726	113	214	111	0.69	**47.3**	**09/04**	0.05	21/09	1.3	0.30	0.07
		1999	773	121	247	128	0.80	23.2	24/12	0.06	26/07	2.0	0.43	0.09
		2000	776	121	295	153	0.95	24.5	30/10	0.07	06/09	2.3	0.46	0.10
054007	**Arrow at Broom** C.A: 319.0 km^2	**57..95**	**700**		**273**		**2.76**	**90.8**	**30/12 1981**	**0.22**	**21/08 1976**	**5.4**	**1.63**	**0.75**
M.A: EA	Local No: 2104 Sens.: 10.4 B/full: 29.0m^3s^{-1}													
F.A.R: SGEI	Level: 30m UE: .04 FAI: 0.964													
Comment: Up to 1976 rated section; not rated above bankfull when extensive inundation. Replaced in 1976 with a Crump profile weir, 12m wide with a higher flow capacity. Gw pumping for PWS significantly augments low flow through effluent returns. Contains Redditch and Alcester. # Low relief, predominantly agricultural catchment upon Mercia Mudstone, with small glacial gravel deposits in the eastern headwaters. Responsive; sewage effluent maintains low flows.		1996	514	73	166	61	1.68	18.5	12/02	0.72	18/09	2.6	1.29	0.76
		1997	668	95	170	62	1.72	45.0	28/11	0.67	11/08	2.8	1.08	0.75
		1998	818	117	349	128	3.53	**136.6**	**09/04**	0.91	12/08	6.2	1.79	1.00
		1999	857	122	363	133	3.67	78.0	16/01	0.85	30/07	7.9	2.17	0.98
		2000	909	130	438	160	4.42	85.6	30/10	0.94	11/08	9.8	2.15	1.08
054023	**Badsey Brook at Offenham** C.A: 95.8 km^2	**68..95**	**660**		**207**		**0.63**	**14.0**	**22/12 1995**	**0.02**	**27/08 1976**	**1.5**	**0.28**	**0.07**
M.A: EA	Local No: 2023 Sens.: 10.0 S/full: 12.0m^3s^{-1}													
F.A.R: PEI	Level: 24m UE: .03 FAI: 0.992													
Comment: Original trapezoidal flume replaced (structure deterioration and weedgrowth problems) in 1995 by Flat V Crump profile (1:10) weir 5m wide, wing walls at 0.7m in straightened cut. Cableway. Flood banks contain all but highest flows but inundation u/s. Earlier record under review. PWS from headwater springs; river abstractions for horticulture. Sewage works short way u/s. Net result moderate, significant at low flows. # River rises from springs on Cotswolds Scarp; steep headwaters. Drift free, mostly Liassic argillaceous rocks. Agriculture and horticulture dominate.		1996	453	69	109	53	0.33	4.8	09/02	0.05	22/07	0.7	0.16	0.07
		1997	605	92	79	38	0.24	2.7	29/11	0.04	16/08	0.5	0.14	0.07
		1998	742	112	278	134	0.85	**41.7**	**09/04**	0.09	12/08	1.5	0.36	0.11
		1999	818	124	378	183	1.15	22.2	24/12	0.09	29/07	2.7	0.51	0.13
		2000	833	126	370	179	1.12	14.6	30/10	0.12	12/09	2.9	0.54	0.15

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
054002	**Avon at Evesham** C.A: 2210.0 km^2	**38..95**	*665*		**219**		**15.38**	**371.0**	**11/07**	**1.27**	**04/10**	**34.6**	**8.34**	**2.94**
M.A: EA	Local No: 2002 Sens.: 15.0 B/full: 125.0m^3s^{-1}								**1968**		**1959**			
F.A.R: SPGEI	Level: 20m UE: .04 FAI: 0.977													
Comment: VA station. Recording site, control and gauging site are widely separated; recording at site where all flows contained. Gauge site can measure out-of-bank flows. Navigation control at lock d/s. Coarse early low flow record owing to crude rating. Extensive modification to flow regime from abstractions and returns. # Large catchment of low relief, draining argillaceous rocks almost exclusively. Contains many large towns, but chief land use is agriculture.		1996	474	71	134	61	9.37	74.9	12/02	3.82	22/09	17.1	6.16	4.00
		1997	625	94	127	58	8.88	85.5	29/11	3.57	11/08	17.9	5.30	4.01
		1998	760	114	295	135	20.65	427.0	10/04	4.28	13/08	42.9	10.32	4.52
		1999	794	119	321	147	22.48	175.2	25/12	4.66	31/07	50.3	14.09	5.28
		2000	840	126	378	173	26.41	200.7	30/10	4.79	13/09	62.4	14.85	5.37
054036	**Isbourne at Hinton on the Green** C.A: 90.7 km^2	**72..95**	**698**		**218**		**0.63**	**31.4**	**13/11**	**0.00**	**25/08**	**1.4**	**0.33**	**0.08**
M.A: EA	Local No: 2036 Sens.: 33.0 B/full: 11.0m^3s^{-1}								**1974**		**1976**			
F.A.R: PEI	Level: 26m UE: .02 FAI: 0.991													
Comment: Crump profile weir, 4.5m wide by 0.5m deep, in an incised trapezoidal channel. Cableway for high flows. Commonly exceeds bankfull but not bypassed. Insensitive low flows. PWS from headwater springs; spray irrigation and WRW effluent have dominant effect on the lowest flows. # Steep headwaters; rise from springs from the Cotswold Oolites; Drift free, most of the catchment drains Lias clays. Agriculture and horticulture dominate. EA use as a tributary index gauge in flood forecasting system.		1996	506	72	134	61	0.38	9.3	12/04	0.05	22/07	0.8	0.18	0.07
		1997	656	94	111	51	0.32	3.9	28/11	0.09	31/05	0.7	0.17	0.10
		1998	765	110	267	122	0.77	38.0	09/04	0.12	22/08	1.5	0.46	0.13
		1999	892	128	333	153	0.96	22.9	24/12	0.17	31/07	2.0	0.65	0.19
		2000	926	133	378	173	1.09	21.3	30/10	0.16	12/09	2.3	0.62	0.20
054015	**Bow Brook at Besford Bridge** C.A: 156.0 km^2	**69..95**	**648**		**206**		**1.02**	**57.3**	**13/01**	**0.00**	**09/08**	**2.4**	**0.39**	**0.10**
M.A: EA	Local No: 2015 Sens.: 22.0 B/full: 19.0m^3s^{-1}								**1993**		**1976**			
F.A.R: GEI	Level: 13m UE: FAI:													
Comment: Prefabricated Flat V Crump profile weir, 4.01m wide, 1:10 cross slopes, wing walls at 0.67m, replaced full-width (2.44m) rectangular thin plate weir, thus improving flood flow measurement. Cableway retained. Important gauge for monitoring abstraction licences at low flows. Problems with weedgrowth and siltation. Extensive floodplain plus backing up from d/s bridge and the R Avon. Signif. abstractions for spray irrigation plus sewage augmentation. Highest recorded flood (3.3m, 09/04/98) likely overestimated. # Low lying, agricultural catchment. Drift free, draining Mercia Mudstone in headwaters and Lias clays otherwise. Fairly responsive catchment.		1996	504	78	133	65	0.66	15.9	09/01	0.06	24/07	1.3	0.27	0.08
		1997	633	98	114	55	0.56	25.1	29/11	0.05	17/08	0.9	0.18	0.08
		1998	720	111	468	227	2.31	357.9	09/04	0.09	30/08	4.0	0.42	0.10
		1999	827	128	536	260	2.65	97.5	16/01	0.09	27/07	7.1	0.75	0.13
		2000	852	131	374	182	1.84	58.4	30/10	0.11	13/09	5.4	0.72	0.13
054089	**Avon at Bredon** C.A: 2674.0 km^2	**88..95**	**653**		**200**		**16.96**	**144.6**	**01/12**	**1.60**	**28/08**	**42.7**	**8.84**	**3.04**
M.A: EA	Local No: 2128 Sens.:								**1992**		**1995**			
F.A.R: SPGEI	Level: 9m UE: FAI:													
Comment: Ultrasonic single path instrument installed in 1979, unsuccessful experiment. Replaced in 1988 by multipath cross path US in broad reach. US has under-measured, data being reassessed. Data produced valid to bankfull; river inundates hams on lb extensively in flood. For very high flows use 54002. Extensive flow modification by abstractions and returns. # Large catchment of low relief, draining argillaceous rocks almost exclusively. Contains many large towns but chief land use is agriculture.		1996	475	73											
		1997	624	96	101	51	8.53	101.7	29/11	2.24	13/08	16.3	5.00	2.92
		1998	752	115	221	111	18.75	125.0	09/04	3.21	21/08	47.4	10.70	3.90
		1999	800	123	266	133	22.52	*127.3*	*16/01*	3.82	31/07	53.1	13.77	4.34
		2000	841	129										
054057	**Severn at Haw Bridge** C.A: 9895.0 km^2	**71..95**	**793**		**334**		**104.70**	**677.2**	**03/02**	**8.70**	**23/08**	**249.3**	**66.82**	**19.31**
M.A: EA	Local No: 2057 Sens.: 4.4 B/full: 460.0m^3s^{-1}								**1990**		**1976**			
F.A.R: SRPGEI	Level: 6m UE: .03 FAI: 0.977													
Comment: Velocity-area station at a road bridge (B4213). Difficult site, but includes Avon flow. Tidally affected; substantial bed movement. Both restrict accuracy. Likely to be combined with the u/s Deerhurst US record (installed 12:1995) when satisfactory method found. Substantial modification to flow owing to PWS exports and effluent returns (chiefly to the Stour, Worcester, Avon and Thames). # Very large, diverse catchment, lowest on the Severn. Paleozoic slates in Welsh headwaters, Permo-Triassic sediments in middle reaches and Jurassic and Liassic clays from the Avon catchment.		1996	662	83	243	73	76.05	416.1	13/02	15.57	17/07	158.5	56.12	17.66
		1997	757	95	225	67	70.75	405.7	30/11	16.22	10/08	170.4	39.56	19.08
		1998	931	117	433	130	135.83	562.4	11/04	20.38	19/08	378.4	73.79	25.15
		1999	996	126	454	136	142.54	513.4	27/12	16.31	27/07	364.3	96.51	21.64
		2000	1073	135	547	164	171.11	**872.6**	**14/12**	22.53	12/08	403.5	106.73	27.44
054017	**Leadon at Wedderburn Bridge** C.A: 293.0 km^2	**62..95**	**698**		**211**		**1.96**	**48.4**	**10/02**	**0.07**	**17/08**	**4.5**	**0.97**	**0.30**
M.A: EA	Local No: 2017 Sens.: 10.6 B/full: 14.0m^3s^{-1}								**1977**		**1976**			
F.A.R: GEN	Level: 9m UE: .01 FAI: 0.995													
Comment: Trapezoidal flume flanked by broad-crested weirs within vertical sidewalls. Model rating includes drowned conditions; when the Severn is high backing up occurs as flap valves operate. Weed growth may cause drowning. Cableway for high flows. Minimal augmentation from gw pumping, spray irrigation may become significant at Q95. Mostly natural regime. # Low relief, agricultural catchment. Virtually Drift free; headwaters and middles reaches s'sts of Devonian and Triassic age, some Palaeozoic mixed sediments to the north, Mercia Mudstone in the lower reaches.		1996	565	81	161	76	1.49	19.1	09/01	0.28	23/07	3.2	0.56	0.31
		1997	682	98	105	50	0.98	13.2	28/11	0.27	22/07	2.1	0.50	0.31
		1998	778	111	233	110	2.17	37.4	09/04	0.30	22/09	5.1	1.07	0.33
		1999	850	122	309	146	2.87	25.2	16/01	0.28	31/07	7.6	1.44	0.37
		2000	977	140	424	201	3.92	29.9	07/12	0.37	12/09	12.5	1.42	0.42
054027	**Frome at Ebley Mill** C.A: 198.0 km^2	**69..95**	**850**		**394**		**2.47**	**19.4**	**30/05**	**0.26**	**25/08**	**4.7**	**1.98**	**0.75**
M.A: EA	Local No: 2027 Sens.: 8.3 B/full: 18.0m^3s^{-1}								**1979**		**1976**			
F.A.R: PEI	Level: 31m UE: .02 FAI: 0.951													
Comment: Velocity-area station on a curved reach. Control is a compound broad-crested weir. River inundates widely at gauging section. Substantial headwater abstractions for PWS; further industrial abstractions and significant sewage outfall. # Steep headwaters drain the Cotswolds Scarp of Oolitic L'st and Lias s'st. Valley bottoms are considerably urbanised and underlain by Lias clays. The station is in Stroud.		1996	676	80	298	76	1.87	4.9	12/01	0.65	16/10	3.3	1.63	0.73
		1997	788	93	266	68	1.67	5.6	25/12	0.73	19/08	2.7	1.49	0.86
		1998	967	114	456	116	2.86	10.6	07/01	0.83	23/09	4.9	2.65	0.96
		1999	1074	126	552	140	3.47	14.3	23/12	1.30	14/09	6.1	3.14	1.50
		2000	1198	141	653	166	4.09	**19.9**	**29/10**	1.08	12/09	7.9	3.22	1.21
054098	**Cam at Cambridge** C.A: 29.3 km^2													
M.A: EA	Local No: Sens.:													
F.A.R: I	Level: 11m UE: FAI:													
Comment: Flat V weir, 6m wide with 2.295m wing walls and integral access bridge. Subject to accretion u/s. Owned and built by British Waterways but operated by EA since 1992. No dmfs 17/06 - 08/07/98 - gauge house rebuilding. Cam acts as important feeder for Gloucester and Sharpness Canal. Unresponsive flow regime. # Drains Cotswold escarpment.		1996													
		1997												
		1998	959											
		1999	1063		640		0.59	10.1	23/12	0.18	14/09	1.0	0.46	0.23
		2000	1116		733		0.68	18.2	29/10	0.18	12/09	1.2	0.50	0.20

Map 6: ANGLIAN



Area: 26,795 km^2

Average Rainfall (1961–90): 596 mm

Gauging Station Register

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
029009	Ancholme	Toft Newton	TF 033877	27.2	FV	1974..00	611	160	451	293	00	51	96	0.14	0.00	10/90	2.0	.52	0.4	>0.00
029004	Ancholme	Bishopbridge	TF 032911	54.7	CC	1968–99	616	347	269	642	98	93	76	0.60	>0.00	09/70	6.2	.53	1.4	0.02
029005	Rase	Bishopbridge	TF 032912	66.6	C	1971..00	641	211	430	419	00	82	91	0.45	0.03	08/76	7.3	.55	1.0	0.06
029001	Waithe Beck	Brigsley	TA 253016	108.3	FL	1960..00	693	88	605	173	69	23	91	0.30	0.02	09/91	2.0	.85	0.7	0.06
029003	Lud	Louth	TF 337879	55.2	C	1968..00	697	255	442	402	69	83	91	0.45	0.09	10/96	2.9	.90	0.9	0.12
029002	Great Eau	Claythorpe Mill	TF 416793	77.4	CC	1962..00	688	276	412	387	79	123	76	0.68	0.18	08/76	4.1	.89	1.2	0.28
030004	Lymn	Partney Mill	TF 402676	61.6	C	1962..00	689	253	436	386	69	115	91	0.50	0.08	08/91	7.1	.65	0.9	0.14
030017	Witham	Colsterworth	SK 929246	51.3	FV	1978–00	665	147	518	216	79	63	91	0.24	0.01	08/94	5.8	.50	0.5	0.02
030015	Cringle Brook	Stoke Rochford	SK 925297	50.5	TP	1976–00	692	184	508	274	79	85	96	0.29	0.03	10/90	1.7	.89	0.6	0.07
030005	Witham	Saltersford total	SK 927335	126.1	CB	1968..00	660	200	460	293	00	59	76	0.80	0.05	08/76	7.8	.78	1.7	0.12
030018	Honington Bk	Honington	SK 936433	22.3	FV	1983..00	593	173	420	332	00	78	89	0.12	0.01	08/96		.67	0.3	0.02
030001	Witham	Claypole Mill	SK 842480	297.9	B	1959–00	624	190	434	315	00	63	76	1.80	0.06	07/76	14.7	.68	3.9	0.35
030033	Brant	Brant Broughton	SK 929545	65.8	FV	1990..00	585	104	481	147	99	36	92	0.22	>0.00	08/91		.35	0.7	0.01
030013	Heighton Bk	Heighington	TF 042696	21.2	C	1976..00	610	187	423	308	80	79	89	0.13	0.01	08/76	0.7	.75	0.3	0.02
030012	Stainfield Bk	Stainfield	TF 127739	37.4	CC	1970..00	631	202	429	349	79	51	91	0.24	>0.00	08/91	10.2	.46	0.6	0.01
030002	Barlings Eau	Langworth Br	TF 066766	210.1	FV	1960..00	616	200	416	435	00	65	96	1.33	0.01	08/76	20.3	.45	3.3	0.04
030011	Bain	Goulceby Bridge	TF 246795	62.5	C VA	1971–00	690	172	518	304	80	51	91	0.34	0.04	09/96	2.5	.74	0.7	0.06
030003	Bain	Fulsby Lock	TF 241611	197.1	B	1962..00	666	201	465	326	80	62	91	1.26	0.02	07/76	18.1	.58	2.9	0.10
030006	Slea	Leasingham Mill	TF 088485	48.4	TP	1974..00	617	346	271	636	79	1	76	0.53	0.00	10/96	1.9	.89	1.5	
030014	Pointon Lode	Pointon	TF 128313	11.9	C	1972..00	601	193	408	315	80	42	76	0.07	0.00	09/96	2.5	.49	0.2	>0.00
031022	Jordan	Mkt Harborough	SP 740867	20.8	C	1970..00	660	127	533	256	96	138	75	0.08	0.00	08/95		.36	0.3	>0.00
031017 *	Stonton Brk	Welham Rd Br	SP 759918	42.7	C	1970..85	649	100	549	131	72	114	75	0.14	0.00	07/76		.52	0.6	0.01
031021	Welland	Ashley	SP 819915	250.7	C VA	1970..00	661	161	500	317	00	79	96	1.28	0.09	08/95	29.6	.40	3.4	0.13
031001	Eye Brook	Eye Brook Res	SP 853941	60.1	C	1937..99	656	120	536	320	87	12	44	0.23	>0.00	11/40		.44	0.6	0.03
031007	Welland	Barrowden	SP 948999	411.6	C	1968..00	659	169	490	281	79	76	96	2.20	0.09	07/72		.48	4.6	0.22
031020 *	Morcott Brk	South Luffenham	SK 939018	19.6	C	1970..85	632	148	484	262	74	97	73	0.09	0.01	07/76		.55	0.3	0.01
031010	Chater	Fosters Bridge	SK 961030	68.9	CC	1968..00	668	238	430	379	77	91	73	0.52	0.02	07/76	9.3	.52	1.2	0.07
031025	Gwash S Arm	Manton	SK 875051	24.5	FV	1978..00	699	247	452	355	00	95	96	0.19	>0.00	09/96	11.1	.28	0.5	0.01
031026	Egleton Brk	Egleton	SK 878073	2.5	FV	1978..00	686	240	446	416	00	88	96	0.02	0.00	08/95	0.8	.34	0.0	
031028	Gwash	Church Bridge	SK 951082	76.5	CC	1982..00	669	71	598	107	86	47	00	0.17	0.07	09/83		.79	0.3	0.08
031016	North Brook	Empingham	SK 957089	36.5	C	1969..00	636	206	430	335	79	99	73	0.24	0.03	07/76		.92	0.5	0.07
031006	Gwash	Belmesthorpe	TF 038097	150.0	C	1967..00	645	160	485	300	69	72	76	0.76	0.20	09/76	12.5	.83	1.4	0.29
031004	Welland	Tallington	TF 095078	717.4	CB+2C	1967..00	653	174	479	296	69	57	76	3.95	0.14	10/95	41.4	.52	9.2	0.57
031023	West Glen	Easton Wood	SK 965258	4.4	FV	1972–00	654	165	489	251	00	57	73	0.02	0.00	08/00	1.9	.14	0.1	
031024	Holywell Brk	Holywell	TF 026148	22.3	C	1971..00	620	170	450	293	79	14	76	0.12	0.00	11/76		.91	0.2	0.02
031009	West Glen	Shillingthorpe	TF 074113	173.0	C	1970..00	620	53	567	117	00	23	73	0.29	0.00	11/90		.68	0.8	
031013	East Glen	Irnham	TF 038273	71.5	FV	1969..00	622	53	569	121	79	22	73	0.12	0.00	08/76		.34	0.3	
031008	East Glen	Manthorpe	TF 068160	136.2	FV	1968..00	618	69	549	194	80	22	96	0.30	0.00	08/00		.28	0.6	
031027 *	Bourne Eau	Bourne	TF 107199	10.6	TP	1981..88	595	443	152	485	87	485	87	0.15	0.03	10/85		.73	0.3	0.04
031002	Glen	Kates Bridge	TF 106149	341.9	FV+FL	1960..00	629	109	520	215	79	14	76	1.18	0.00	07/76	18.7	.60	2.9	0.05
032008	Nene/Kislingb'	Dodford	SP 627607	107.0	C	1945..00	672	183	489	311	00	76	76	0.62	0.05	09/49	10.0	.57	1.4	0.12
032029 *	Flore	Experimental	SP 655604	7.0	FL	1973..79	606	198	408	171	74	144	78	0.04	0.00	08/76	2.5	.47	0.1	
032031	Wootton Brk	Wootton Park	SP 726577	73.8	FV	1982..00	635	131	504	96	91	53	97	0.31	0.03	08/95		.48	0.9	0.04
032006	Nene/Kislingb'	Upton	SP 721592	223.0	FL+C	1939–00	670	192	478	320	79	77	44	1.38	0.13	08/44	14.5	.60	2.8	0.26
032012	Wootton Brk	Lady Bridge	SP 736571	53.3	C	1968..00	641	165	476	374	98	93	97	0.28	0.01	08/76		.42	1.0	0.04
032007	Nene/Brampt'	St Andrews	SP 747617	232.8	FV	1939..00	664	155	509	315	41	57	76	1.14	0.04	08/44	18.2	.58	2.4	0.22
032019	Slade Brook	Kettering	SP 873763	58.3	FV	1970..00	656	263	393	445	98	179	97	0.49	0.04	08/95		.60	1.3	0.06
032023 *	Grendon Brk	Ryeholmes Br	SP 883833	47.5	C	1970..85	605	67	538	102	74	74	72	0.10	0.00	09/71		.57	0.4	
032004	Ise Brook	Harrowden Mill	SP 898715	194.0	FV	1943..00	648	220	428	380	60	69	44	1.35	0.09	08/95	15.0	.54	3.0	0.19
032003	Harpers Brk	Old Mill Bridge	SP 983799	74.3	CC	1938..00	637	177	460	318	00	67	44	0.42	0.05	08/44	7.8	.49	0.9	0.07
032002	Willow Brook	Fotheringhay	TL 067933	89.6	FL	1938..00	619	275	344	437	79	85	44	0.78	0.09	08/44	5.5	.73	1.3	0.25
032020 *	Wittering Brk	Wansford	TL 089995	46.9	C	1970–85	576	151	425	229	79	86	73	0.22	0.03	07/76		.85	0.4	0.09
032001 *	Nene	Orton	TL 166972	1634.3	MIS	1939..96	626	179	447	312	79	54	44	9.28	0.48	08/44		.51	24.2	1.12
033005 *	Bedford Ouse	Thornborough	SP 736353	388.5	MIS	1951–91	658	206	452	448	51	72	73	2.54	0.04	08/76	22.0	.51	6.1	0.24
033018	Tove	Cappenham Br	SP 714488	138.1	CB	1962..00	682	241	441	360	79	103	76	1.06	0.09	07/76	15.9	.54	2.3	0.19
033057	Ouzel	Leighton Buz'rd	SP 917241	119.0	C	1976..00	659	209	450	288	79	71	97	0.79	0.14	08/76	7.6	.68	1.5	0.21
033030 *	Clipstone Brk	Clipstone	SP 933255	40.2	C	1957..80	640	184	456	339	79	36	73	0.23	0.01	09/73	9.2	.41	0.5	0.02
033058	Ouzel	Bletchley	SP 883322	215.0	FV	1978..00	673	276	397	407	00	98	97	1.88	0.41	08/97	22.7	.44	3.8	0.48
033015	Ouzel	Willen	SP 882408	277.1	FV	1962..00	658	231	427	350	00	86	73	2.03	0.19	08/76	16.1	.55	4.5	0.47
033037	Bedford Ouse	Newport Pagnell	SP 877443	800.0	CC+C	1969–00	665	185	480	324	79	51	97	4.69	0.17	08/76	63.9	.47	11.7	0.41
033009 *	Bedford Ouse	Harrold Mill	SP 951565	1320.0	CB	1955..93	659	226	433	381	60	82	76	9.46	0.51	09/59	85.9	.53	22.7	1.55
033002	Bedford Ouse	Bedford	TL 055495	1460.0	MIS	1933–00	655	223	432	408	37	52	34	10.32	0.04	08/34	82.4	.53	26.8	1.01
033039	Bedford Ouse	Roxton	TL 160535	1660.0	FV	1972–00	646	217	429	342	00	76	73	11.40	0.34	08/76	96.2	.56	27.8	1.97
033065	Hiz	Hitchin	TL 185290	11.9	CC	1980..99	635	90	545	159	83	16	97	0.03	>0.00	09/97		.86	0.1	0.01
033033	Hiz	Arlesey	TL 190379	108.0	C	1973–00	618	194	424	265	94	101	97	0.67	0.23	08/76	3.5	.85	1.1	0.34
033028	Flit	Shefford	TL 143393	119.6	FL	1966–00	617	222	395	325	00	111	73	0.84	0.18	08/76	5.9	.73	1.4	0.34
033022	Ivel	Blunham	TL 153509	541.3	C	1959..00	594	172	422	253	79	69	97	2.96	0.56	08/76	21.2	.73	5.3	1.04
033012	Kym	Meagre Farm	TL 155631	137.5	CB	1960–00	610	143	467	240	77	24	73	0.62	>0.00	07/76	16.5	.26	1.4	0.02
033026	Bedford Ouse	Offord	TL 216669	2570.0	MIS	1970..00	624	169	455	271	79	43	76	13.77	0.69	08/76		.49	33.3	2.00
033020	Alconbury B	Brampton	TL 208717	201.5	MIS	1963..00	594	122	472	274	00	17	73	0.78	>0.00	10/72	13.1	.29	2.1	0.01
033001 *	Bedford Ouse	Brownshill St'nch	TL 369727	3030.0	MIS	1936..62	616	151	465	332	37	56	44	14.49	0.79	09/49		.40	35.5	0.99
033035	Ely Ouse	Denver Complex	TF 588010	3430.0	MIS	1958..00	587	111	476	236	69	13	96	12.10	0.00	11/00		.48	30.2	
033040	Rhee	Ashwell	TL 267401	2.0	FL	1965..00	592	957		1585	79	345	97	0.06	0.01	03/97		.98	0.1	0.02
033068	Cheney Water	Gatley End	TL 296411	5.0	C	1982..99	592	101	491	177	88	13	96	0.02	0.00	12/99		.97	0.0	
033027	Rhee	Wimpole	TL 333485	119.1	FL	1965–00	578	133	445	250	79	18	97	0.50	0.01	08/76	5.1	.64	1.2	0.06
033064	Whaddon Brk	Whaddon	TL 359466	16.0	FL	1980..00	584	166	418	235	00	108	97	0.08	0.04	08/98		.90	0.1	0.04
033062	Guilden Brk	Fowlmere	TL 403457	3.4	FL	1964..00	568	519	47	1002	79	148	97	0.06	>0.00	09/97		.97	0.1	0.02
033061	Shep	Fowlmere One	TL 402460	3.4	C	1995..00	554	566		900	00	186	97	0.06	0.01	08/97		.91	0.1	0.02
033021	Rhee	Burnt Mill	TL 415523	303.0	C	1962..00	574	121	453	206	79	29	97	1.17	0.08	08/76	9.2	.74	2.4	0.25
033051	Cam	Chesterford	TL 505426	141.0	CB	1964..00	609	131	478	215	00	40	97	0.59	0.14	08/97	8.1	.66	1.1	0.17

Station number	River name	Station name	Grid reference		Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
033024	Cam	Dernford	TL	466506	198.0	TP	1949..00	597	149	448	240	79	42	97	0.94	0.14	09/97	8.2	.77	1.6	0.29
033066	Granta	Linton	TL	570464	59.8	CC	1981..00	615	94	521	198	87	7	91	0.18	0.00	12/91		.46	0.4	0.01
033055	Granta	Babraham	TL	510504	98.7	FV	1963..00	601	73	528	160	87	5	97	0.23	>0.00	10/76	4.0	.55	0.5	0.01
033053	Granta	Stapleford	TL	471515	114.0	MIS	1949..00	586	61	525	156	87	2	97	0.22	0.00	11/97		.57	0.5	
033016 *	Cam	Jesus Lock	TL	450593	761.5	MIS	1959..83	582	118	464	184	79	38	73	2.86	0.34	09/64		.64	6.5	0.81
033003 *	Cam	Bottisham	TL	508657	803.0	MIS	1936..87	591	143	448	325	51	42	73	3.64	0.60	08/57		.65	7.0	0.89
033056	Quy Water	Lode	TL	531627	76.4	MIS	1965..00	569	77	492	163	88	8	65	0.19	0.00	10/72		.78	0.5	0.01
033052	Swaffham	Swaffham B'beck	TL	553628	36.4	C	1963..00	566	133	433	222	69	29	97	0.15	0.02	08/76	0.3	.91	0.3	0.04
033067	New River	Burwell	TL	608696	19.6	C	1982..00	586	399	187	1146	99	171	97	0.25	0.09	10/96		.95	0.4	0.09
033050	Snail	Fordham	TL	631703	60.6	FV	1960..00	589	153	436	236	83	69	97	0.29	0.07	08/92	1.8	.88	0.5	0.10
033014	Lark	Temple	TL	758730	272.0	CB	1960..00	613	145	468	233	69	60	97	1.25	0.26	09/91	8.4	.78	2.2	0.48
033023	Lea Brook	Beck Bridge	TL	662733	101.8	C	1962–00	570	74	496	153	69	7	91	0.24	>0.00	10/91	2.7	.71	0.6	0.02
033004 *	Lark	Isleham	TL	648760	466.2	MIS	1936..86	609	122	487	260	51	41	73	1.80	0.13	08/76		.65	3.3	0.44
033046	Thet	Red Bridge	TL	996923	145.3	C	1967–00	639	194	445	311	00	81	73	0.89	0.07	08/76	7.7	.62	2.0	0.14
033048	Larling Brook	Stonebridge	TL	928907	21.4	FL	1969..99	629	81	548	181	88	25	97	0.05	>0.00	10/96	0.3	.80	0.1	0.01
033045	Wittle	Quidenham	TM	027878	28.3	CB	1967..00	624	147	477	265	69	47	73	0.13	>0.00	08/76	1.2	.65	0.3	0.01
033044	Thet	Bridgham	TL	957855	277.8	C	1967–00	639	180	459	283	69	82	73	1.59	0.21	08/76	7.9	.75	3.4	0.39
033019	Thet	Melford Bridge	TL	880830	316.0	C	1962..00	625	185	440	295	87	88	73	1.85	0.16	08/76	7.2	.78	3.7	0.49
033063	Little Ouse	Knettishall	TL	955807	101.0	MIS	1980–00	617	140	477	227	87	53	97	0.45	0.06	08/90	4.3	.70	0.9	0.12
033011	Little Ouse	Euston	TL	892801	128.7	CB	1948..00	595	101	494	194	87	30	97	0.41	>0.00	08/49	3.1	.74	0.8	0.08
033013	Sapiston	Rectory Bridge	TL	896791	205.9	TP	1949..00	603	103	500	182	00	22	91	0.67	0.01	10/91	5.3	.65	1.4	0.09
033008 *	Little Ouse	Thetford Staunch	TL	860832	699.0	MIS	1958–68	602	136	466	179	61	92	64	3.01	0.39	09/64		.73	6.1	0.66
033034	Little Ouse	Abbey Heath	TL	851844	688.5	C	1968..00	615	169	446	260	69	77	96	3.69	0.62	08/76	17.9	.80	7.1	1.09
033049 *	Stanford Wtr	Buckenham Tofts	TL	834953	43.5	B	1973–80	633	191	442	270	75	124	73	0.26	0.08	08/76	0.7	.89	0.5	0.11
033006	Wissey	Northwold	TL	771965	274.5	FL	1956..00	658	204	454	317	69	88	91	1.77	0.26	09/91	6.9	.82	3.4	0.45
033029	Stringside	Whitebridge	TF	716006	98.8	FL	1965..00	638	154	484	253	66	36	91	0.48	0.01	08/95	2.7	.85	1.1	0.04
033007	Nar	Marham	TF	723119	153.3	FL	1953–00	686	235	451	342	58	96	91	1.14	0.21	09/91	3.5	.91	2.1	0.41
033025 *	Babingly	W Newton Mill	TF	696256	39.6	TP	1963..76	671	288	383	401	66	143	73	0.36	0.11	09/73		.92	0.6	0.16
033054	Babingley	Castle Rising	TF	680252	47.7	FV	1976–00	681	319	362	443	81	134	91	0.48	0.10	10/91	1.0	.94	0.8	0.16
033032	Heacham	Heacham	TF	685375	59.0	C	1965..00	687	110	577	183	94	30	91	0.21	0.02	12/91	0.4	.96	0.4	0.05
034012	Burn	Burnham Overy	TF	842428	80.0	CC	1966..00	678	121	557	203	69	38	91	0.31	0.06	09/91	0.6	.95	0.5	0.09
034018	Stiffkey	Warham All Sts	TF	944414	87.8	FV	1972..00	672	184	488	487	75	70	91	0.51	0.05	08/91	3.0	.79	0.9	0.10
034003	Bure	Ingworth	TG	192296	164.7	MIS	1959..00	680	210	470	285	69	144	91	1.10	0.47	08/91	5.6	.83	1.7	0.56
034019	Bure	Horstead Mill	TG	267194	313.0	MIS	1974..00	667	217	450	278	87	160	91	2.15	0.09	01/97		.76	3.2	0.78
034008	Ant	Honing Lock	TG	331270	49.3	C	1966..00	656	198	458	243	69	144	91	0.31	0.09	05/96	1.1	.87	0.4	0.16
034011	Wensum	Fakenham	TF	919294	161.9	MIS	1967..00	703	169	534	264	69	79	96	0.87	0.15	09/91	4.1	.83	1.6	0.27
034014	Wensum	Swanton Morley	TG	020184	397.8	CC	1969..99	679	208	471	297	87	109	91	2.62	0.52	08/91		.75	4.9	0.91
034004	Wensum	Costessey Mill	TG	177128	570.9	MIS	1960..00	684	220	464	318	69	105	91	3.98	0.52	08/91	19.8	.74	7.2	1.27
034005	Tud	Costessey Park	TG	170113	73.2	FL	1961..00	668	146	522	236	69	76	91	0.34	0.04	09/97	3.0	.65	0.7	0.08
034001	Yare	Colney	TG	182082	231.8	MIS	1959..00	658	190	468	303	69	93	91	1.39	0.19	08/90	10.8	.66	3.1	0.32
034002	Tas	Shotesham	TM	226994	146.5	FV	1957..00	623	156	467	280	69	60	73	0.72	0.11	07/86	7.8	.60	1.6	0.17
034010	Waveney	Billingford Br	TM	168782	149.4	MIS	1968..00	606	155	451	281	87	41	73	0.73	0.04	07/76	12.6	.45	1.7	0.07
034007	Dove	Oakley Park	TM	174772	133.9	CC	1966..00	589	155	434	291	87	49	73	0.66	0.13	07/90	12.5	.47	1.4	0.14
034006	Waveney	Needham Mill	TM	229811	370.0	CC	1963..00	600	150	450	287	87	46	73	1.75	0.24	07/90	23.0	.47	4.1	0.30
034013 *	Waveney	Ellingham Mill	TM	364917	670.0	US	1972..96	580	27	553	38	75	7	96	0.57	0.10	10/96		.83	0.8	0.12
035013	Blyth	Holton	TM	406769	92.9	CC	1970..00	597	133	464	237	00	41	73	0.39	0.04	08/90		.36	0.8	0.06
035003	Alde	Farnham	TM	360601	63.9	MIS	1981..00	603	138	465	260	87	40	73	0.28	0.03	08/90	7.9	.37	0.6	0.04
035004	Ore	Beversham Br	TM	359583	54.9	CC	1965..00	612	172	440	299	00	65	73	0.30	0.05	07/76	5.6	.46	0.6	0.07
035002	Deben	Naunton Hall	TM	322534	163.1	CC	1964..00	600	143	457	274	87	39	73	0.74	0.04	07/76		.35	1.7	0.09
035014 *	Mill River	Newbourn	TM	270420	27.1	MIS	1948..69	603	176	427	230	61	142	50	0.15	0.10	08/49	0.5	.92	0.2	0.11
035008	Gipping	Stowmarket	TM	058578	128.9	CC	1964..00	584	150	434	279	00	36	73	0.61	0.07	08/90	14.7	.38	1.4	0.08
035010	Gipping	Bramford	TM	127465	298.0	MIS	1969..00	581	122	459	211	00	28	73	1.15	0.09	08/76	14.7	.51	2.6	0.17
035001 *	Gipping	Constantine Wr	TM	154441	310.8	MIS	1964..96	594	137	457	223	87	92	96	1.35	0.09	08/65	19.3	.47	3.1	0.20
036012	Stour	Kedington	TL	708450	76.2	EW	1968–00	615	351	264	830	97	156	85	0.85	0.02	08/76	13.1	.54	2.4	0.05
036011	Stour Brook	Sturmer	TL	696441	34.5	EW	1968..00	604	209	395	399	00	56	73	0.23	0.04	10/72	6.2	.38	0.5	0.05
036010	Bumpstead B	Broad Green	TL	689418	28.3	EW	1968..00	606	153	453	313	87	19	91	0.14	>0.00	08/76	6.8	.23	0.3	>0.00
036008	Stour	Westmill	TL	827463	224.5	FL	1960..00	603	186	417	305	87	90	64	1.32	0.07	08/76	19.8	.43	2.6	0.13
036002	Glem	Glemsford	TL	846472	87.3	FL	1960..00	605	165	440	296	87	48	73	0.46	0.02	10/97	6.2	.44	1.0	0.07
036004	Chad Brook	Long Melford	TL	868459	47.4	EW	1965–00	595	168	427	319	87	35	73	0.25	0.02	08/94	5.3	.48	0.5	0.03
036007	Belchamp Brk	Bardfield Bridge	TL	848421	58.6	FL	1960..00	566	94	472	213	87	17	73	0.17	0.01	09/64	4.4	.42	0.4	0.02
036015	Stour	Lamarsh	TL	897358	480.7	MIS	1972..00	596	158	438	276	00	65	73	2.41	0.23	08/76	32.9	.50	4.6	0.60
036006	Stour	Langham	TM	020344	578.0	FL	1962–00	589	160	429	279	87	78	73	2.94	0.19	07/76	33.8	.53	6.1	0.56
036003	Box	Polstead	TL	985378	53.9	FL	1960..00	581	122	459	219	00	48	97	0.21	0.04	08/76	3.7	.64	0.4	0.06
036013 *	Brett	Higham	TM	032354	195.0	EW	1971..92	573	63	510					0.39	0.06	08/90		.57	0.9	0.05
036009	Brett	Cockfield	TL	914525	25.7	EW	1968..00	614	148	466	333	00	16	73	0.12	0.00	10/97	3.7	.32	0.3	
036005	Brett	Hadleigh	TM	025429	156.0	EW	1962–00	584	135	449	257	00	27	73	0.67	0.04	08/76	11.4	.47	1.5	0.08
036001 *	Stour	Stratf'rd St Mary	TM	042340	844.3	MIS	1928..92	597	115	482	267	87	37	34	3.09	0.14	07/76	29.9	.50	7.7	0.56
037030 *	Holland Brk	Cradle Bridge	TM	171217	48.6	TP	1962..70	558	104	454	157	66	62	65	0.16	0.01	09/64		.48	0.5	0.02
037022	Holland Brk	Thorpe le Soken	TM	179212	54.9	EW	1970..00	545	125	420	327	87	17	73	0.22	>0.00	08/76		.42	0.4	0.01
037029 *	St Osyth Brk	Main Road Br	TM	134159	8.0	FL	1960..76	537	122	415	225	69	24	73	0.03	>0.00	06/70		.39	0.1	>0.00
037028 *	Bentley Brook	Saltwater Bridge	TM	109193	12.1	TP	1960..76	539	89	450	159	69	29	73	0.03	0.00	06/76		.64	0.1	0.01
037026 *	Tenpenny Brk	Tenpenny Bridge	TM	079207	29.0	TP	1961..76	551	90	461	141	66	28	73	0.08	0.01	06/74		.63	0.2	0.01
037027 *	Sixpenny Brk	Ship House Br	TM	054214	5.1	TP	1960..71	562	161	401	260	70	136	68	0.03	>0.00	10/64		.64	0.1	0.01
037012	Colne	Poolstreet	TL	771364	65.1	FL	1963..00	580	130	450	245	87	14	73	0.27	0.00	08/76	11.1	.28	0.7	>0.00
037025 *	Bourne Brook	Perces Bridge	TL	822276	32.1	TP	1965..73	571	118	453	140	67	101	65	0.12	0.03	08/73		.49	0.3	0.03
037024	Colne	Earls Colne	TL	855298	154.2	EW	1971..00	577	142	435	287	00	48	73	0.69	0.06	08/76		.45	1.4	0.10
037005	Colne	Lexden	TL	962261	238.2	FL	1959..00	578	136	442	242	00	48	73	1.03	0.09	08/65	12.3	.52	2.1	0.20
037021 *	Roman	Bounstead Br	TL	985205	52.6	EW	1970..98	551	155	396	276	88	49	73	0.26	0.05	08/76	3.1	.58	0.5	0.06
037016	Pant	Copford Hall	TL	668313	62.5	EW	1965..00	613	199	414	412	97	110	85	0.39	>0.00	08/76	7.6	.42	1.1	0.02
037017	Blackwater	Stisted	TL	793243	139.2	EW	1969–00	587	184	403	279	00	131	85	0.81	0.07	09/94	13.3	.52	1.6	0.16

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
037010	Blackwater	Appleford Bridge	TL 845158	247.3	FL	1962–00	580	161	419	246	00	105	76	1.26	0.16	08/76	11.6	.57	2.4	0.34
037009	Brain	Guithavon	TL 818147	60.7	EW	1962..00	584	193	391	310	00	97	73	0.37	0.12	08/76	3.6	.67	0.6	0.15
037004 *	Blackwater	Langford	TL 836092	337.0	MIS	1932–68	577	128	449	248	60	37	34	1.37	0.13	08/35		.45	2.9	0.23
037011	Chelmer	Churchend	TL 629233	72.6	FL	1963–00	595	153	442	292	00	39	73	0.35	0.02	07/76	9.7	.43	0.8	0.05
037020	Chelmer	Felsted	TL 670193	132.1	EW	1970..00	594	159	435	232	79	56	73	0.67	0.09	07/76	13.4	.51	1.3	0.15
037008	Chelmer	Springfield	TL 713071	190.3	EW	1965–00	593	171	422	285	00	58	73	1.03	0.18	08/76	14.5	.57	2.0	0.28
037038 *	Wid	Margaretting	TL 672000	98.6	MIS	1951..74	593	165	428	231	68	84	73	0.52	>0.00	08/52		.43	1.3	0.05
037007	Wid	Writtle	TL 686060	136.3	EW	1964..00	606	197	409	321	00	68	73	0.85	0.09	08/76	15.6	.41	2.0	0.13
037006	Can	Beach's Mill	TL 690072	228.4	FL	1962–00	592	171	421	297	00	62	73	1.24	0.10	08/76	19.7	.43	2.8	0.19
037013	Sandon Brk	Sandon Bridge	TL 755055	75.1	EW	1963–00	571	122	449	253	95	30	73	0.29	0.02	06/76	8.4	.36	0.6	0.03
037002	Chelmer	Rushes Lock	TL 794090	533.9	FV	1932..00	590	111	479	223	00	25	34	1.88	0.01	08/55		.45	4.8	0.12
037003	Ter	Crabbs Bridge	TL 786107	77.8	FL	1932–00	582	106	476	239	00	17	34	0.26	0.02	08/35	4.6	.49	0.5	0.03
037031	Crouch	Wickford	TQ 748934	71.8	C VA	1976..00	597	148	449	242	00	80	96	0.34	0.05	08/95	9.4	.31	0.7	0.05
037033	Eastwood Brk	Eastwood	TQ 859888	10.4	MIS	1975..00	564	167	397	552	96	100	76	0.05	0.01	08/83	4.8	.33	0.1	0.01
037034 *	Mar Dyke	Stifford	TQ 596804	90.7	EW	1974..98	558	170	388	370	98	64	96	0.49	0.03	08/76		.22	0.9	0.05

Hydrometric Statistics

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
029009	**Ancholme at Toft Newton** C.A: 27.2 km^2	**74..95**	**602**		**162**		**0.14**	**7.1**	**26/04 1981**	**0.00**	**01/08 1995**	**0.4**	**0.05**	**>0.00**
M.A: EA	Local No: Sens.: 74.8 S/full: 10.0m^3s^{-1}													
F.A.R: GI	Level: 8m UE: <.01 FAI: 1.000													
Comment: Flat V weir (3.03m wide) with theoretical calibration confirmed by check gaugings. There is no drowning or bypassing, and the station is immediately u/s of entry point of flows from Toft Newton reservoir. No major abstractions or returns. # The catchment is on Lincolnshire L'st and clays and is flat and rural.		1996	493	82	51	31	0.04	0.5	19/12	>0.00	17/07	0.1	>0.00	>0.00
		1997	589	98	74	46	0.06	0.7	24/12	0.01	05/06	0.1	0.02	0.01
		1998	684	114	177	109	0.15	2.0	18/01	0.01	20/08	0.4	0.08	0.02
		1999	695	115										
		2000	782	130	294	181	0.25	2.5	06/11	0.01	12/09	0.6	0.14	0.02
029004	**Ancholme at Bishopbridge** C.A: 54.7 km^2	**68..95**	**620**		**318**		**0.55**	**23.0**	**26/04 1981**	**0.00**	**01/09 1972**	**1.2**	**0.38**	**0.02**
M.A: EA	Local No: Sens.: 63.3 S/full: 20.9m^3s^{-1}													
F.A.R: SRGI	Level: 4m UE: <.01 FAI: 1.000													
Comment: Compound Crump profile weir, with central crest 2.448m wide and total width of 9.131m. Theoretical rating confirmed to 5.5 m^3s^{-1}, but structure drowns in high flows and is affected by weed growth in summer. Flows are very heavily augmented in summer from Trent-Witham-Ancholme transfer scheme. # Catchment is 53% clay, 47% Lincolnshire L'st, flat and rural.		1996	493	80	485	153	0.84	2.1	06/08	0.08	05/11	1.7	0.75	0.15
		1997	585	94	506	159	0.88	2.8	19/12	0.12	07/06	1.5	0.95	0.23
		1998	679	110	642	202	1.11	6.9	18/01	0.13	22/10	2.4	0.92	0.23
		1999	691	111	549	173	0.95					1.5	0.96	0.23
		2000	784	126										
029005	**Rase at Bishopbridge** C.A: 66.6 km^2	**71..95**	**633**		**207**		**0.44**	**21.4**	**26/04 1981**	**0.02**	**27/08 1976**	**1.0**	**0.23**	**0.06**
M.A: EA	Local No: Sens.: 39.1 S/full: 18.0m^3s^{-1}													
F.A.R: PGEI	Level: 4m UE: .02 FAI: 1.000													
Comment: Crump profile weir (crest length 3.658m) with theoretical calibration. Station drowns above about 9 m^3s^{-1}, and relationship between u/s and d/s levels depends on weed growth and the disposition of sluices and gates at Harlam Weir d/s. Abstractions for public supply in upper reaches has some effect on summer low flows. # Catchment is rural and 89% clay.		1996	529	84	100	48	0.21	5.6	20/12	0.05	22/07	0.4	0.12	0.06
		1997	623	98	137	66	0.29	5.0	19/12	0.08	21/08	0.5	0.18	0.09
		1998	720	114	244	118	0.52	12.5	18/01	0.11	31/08	1.1	0.33	0.12
		1999	716	113										
		2000	856	135	420	203	0.88	17.9	07/11	0.11	12/09	1.7	0.39	0.13
029001	**Waithe Beck at Brigsley** C.A: 108.3 km^2	**60..95**	**687**		**88**		**0.30**	**7.2**	**26/04 1981**	**0.01**	**01/09 1991**	**0.7**	**0.19**	**0.06**
M.A: EA	Local No: Sens.: 2.9 S/full: 17.0m^3s^{-1}													
F.A.R: PGEI	Level: 16m UE: <.01 FAI: 0.971													
Comment: Broad trapezoidal flume (1.83m wide at base) with theoretical rating confirmed to 0.9 m^3s^{-1}. All recorded flows have been contained within the structure. Gw abstraction near Grimsby and irrigation abstractions have significant effect on low flows. # The catchment is 61% Chalk and largely rural.		1996	558	81	25	28	0.09	1.4	19/12	0.01	30/07	0.1	0.07	0.02
		1997	649	94	36	41	0.12	0.9	19/12	0.05	02/11	0.2	0.10	0.06
		1998	783	114	93	106	0.32	1.7	18/01	0.09	29/09	0.6	0.28	0.11
		1999	777	113										
		2000	926	135	144	164	0.49	4.1	06/11	0.15	06/10	1.1	0.31	0.18
029003	**Lud at Louth** C.A: 55.2 km^2	**68..95**	**687**		**258**		**0.45**	**6.8**	**02/11 1968**	**0.07**	**11/12 1991**	**0.9**	**0.33**	**0.12**
M.A: EA	Local No: Sens.: 25.9 S/full: 20.0m^3s^{-1}													
F.A.R: G	Level: 15m UE: .02 FAI: 0.962													
Comment: Crump profile weir, 4.569m wide, at u/s end of long culvert. Theoretical rating confirmed by current metering, capacity limited to 20 m^3s^{-1} - not yet exceeded by culvert. Flows recorded 1966-1968 at sharp-crested weir at Bridge Street. No major abstractions or returns, but mill regulation produces short term spikes. 1920 flood estimated at about 140 m^3s^{-1}. # Catchment is 73% Chalk and largely rural.		1996	606	88	98	38	0.17	2.3	19/12	0.08	13/10	0.2	0.15	0.08
		1997	700	102	140	54	0.24	3.1	23/08	0.12	20/08	0.3	0.20	0.13
		1998	835	122	297	115	0.52	3.9	14/06	0.18	29/09	0.9	0.47	0.21
		1999	769	112	315	122	0.55	2.5	15/01	0.17	19/10	1.1	0.42	0.19
		2000	890	130	360	140	0.63	3.5	03/04	0.25	06/10	1.2	0.48	0.28
029002	**Great Eau at Claythorpe Mill** C.A: 77.4 km^2	**62..95**	**678**		**275**		**0.68**	**13.3**	**11/07 1968**	**0.17**	**26/08 1976**	**1.2**	**0.55**	**0.28**
M.A: EA	Local No: Sens.: 11.6 B/full: 12.8m^3s^{-1}													
F.A.R: GI	Level: 7m UE: <.01 FAI: 0.952													
Comment: Simple low flow Crump profile weir 3.073m wide with flanking broad-crest sections. Total width 9.687m. Crump portion is theoretically rated and upper portion rated theoretically assuming it to be a broad-crested weir. Flows to May 1973 suspect due to error in gauged head and rounding of crest during cleaning. Small amounts of abstraction for irrigation in summer. # The catchment is 81% Chalk and predominantly rural.		1996	592	87	152	55	0.37	3.3	19/12	0.24	27/09	0.5	0.35	0.25
		1997	684	101	195	71	0.48	2.6	19/12	0.29	11/08	0.6	0.44	0.33
		1998	830	122	356	129	0.87					1.3	0.81	0.45
		1999	771	114										
		2000	888	131	382	139	0.94	3.6	28/05	0.50	13/09	1.4	0.82	0.54
030004	**Lymn at Partney Mill** C.A: 61.6 km^2	**62..95**	**682**		**254**		**0.50**	**13.4**	**11/07 1968**	**0.05**	**30/08 1994**	**0.9**	**0.34**	**0.14**
M.A: EA	Local No: Sens.: 23.7 S/full: 18.0m^3s^{-1}													
F.A.R: PI	Level: 15m UE: .01 FAI: 0.980													
Comment: Crump weir with 5m crest rated by model tests and confirmed by check gaugings. The weir is probably non-modular at very high flows due to backing up behind struts and a bridge, but is bypassed just before this point. Abstraction for irrigation in upper reaches may have effect on low flows in summer. # Equally divided between sandstone and Boulder Clay and wholly rural.		1996	576	84	148	58	0.29	6.3	19/12	0.09	25/07	0.5	0.20	0.10
		1997	689	101	182	72	0.35	5.8	19/12	0.11	11/08	0.7	0.24	0.13
		1998	814	119										
		1999	766	112	283	111	0.55	8.0	15/01	0.13	02/08	1.1	0.43	0.16
		2000	860	126	340	134	0.66	8.8	03/04	0.17	13/08	1.3	0.44	0.19

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
030017	**Witham at Colsterworth** C.A: 51.3 km^2	**78..95**	**656**		**148**		**0.24**	**11.5**	**25/06/1982**	**>0.00**	**02/08/1994**	**0.5**	**0.12**	**0.02**
M.A: EA	Local No: Sens.: 29.0 S/full: 9.4m^3s^{-1}													
F.A.R: R	Level: 87m UE: <.01 FAI: 1.000													
Comment: Flat V weir 4.996m wide; theoretical calibration. Summer flows very heavily augmented by transfers from Rutland Water until Jun 1985, when direct Rutland/Saltersford pipeline opened. # Rural catchment underlain by l'st and Boulder Clay.		1996	459	70	64	43	0.10	2.6	12/02	0.02	18/09	0.3	0.04	0.02
		1997	721	110	113	76	0.18	2.9	20/11	0.03	02/06	0.4	0.08	0.04
		1998	747	114	183	124	0.30	9.4	02/01	0.03	26/09	0.7	0.13	0.03
		1999	746	114	169	114	0.27	5.5	16/01	0.03	31/08	0.7	0.13	0.03
		2000	807	123	191	129	0.31	5.5	06/11	0.03	13/09	0.8	0.14	0.03
030015	**Cringle Brook at Stoke Rochford** C.A: 50.5 km^2	**76..95**	**688**		**185**		**0.30**	**2.1**	**27/04/1981**	**>0.00**	**30/10/1990**	**0.6**	**0.23**	**0.07**
M.A: EA	Local No: Sens.: 20.8 S/full: 6.3m^3s^{-1}													
F.A.R: N	Level: 76m UE: <.01 FAI: 0.933													
Comment: Sharp-crested weir 2.74m wide in tunnel under A1. Weir drowns above about 0.25 m^3s^{-1}, but flows depend on position of weirs and sluices immediately d/s. Rating includes an allowance for drowning using assumed positions of d/s weirs and sluices. Major supply abstraction point d/s of station. Site moved u/s in 1987. # Rural catchment, underlain by Oolitic L'st and Lias clay.		1996	479	70	85	46	0.14	0.5	25/02	0.04	05/11	0.3	0.10	0.05
		1997	720	105	*128*	69	0.21					0.4	0.18	0.09
		1998	767	111	224	121	0.36	**3.8**	**10/04**	0.09	29/09	0.8	0.28	0.09
		1999	753	109	223	121	0.36	2.0	16/01	0.08	11/10	0.8	0.25	0.09
		2000	836	122	226	122	0.36	1.9	06/11	0.10	13/09	0.7	0.28	0.11
030005	**Witham at Saltersford total** C.A: 126.1 km^2	**68..87**	**651**		**195**		**0.78**	**10.2d**	**15/08/1980**	**0.04**	**16/08/1976**	**1.6**	**0.51**	**0.12**
M.A: EA	Local No: 30029 Sens.: 17.0													
F.A.R: RPGI	Level: 58m UE: <.01 FAI: 0.976													
Comment: Compound weir with round-crested low flow weir (1.83m wide) and broad-crested high flow portion (8.25m wide). Discharge computed from a single stage recorder to 1973, when it was discovered that a trout screen diverted flow over high flow weir. Second recorder installed, which was removed in Feb 1985 when trout screen was removed. Major abstractions for PWS immediately u/s, with significant effect on low flows. # Catchment is underlain by l'st and clay and is predominantly rural.		1996	469	72	96	49	0.38	2.0	09/01	0.09	09/09	0.8	0.23	0.11
		1997	714	110	151	77	0.60	3.0	30/11	0.16	01/01	1.3	0.46	0.21
		1998	755	116	286	147	1.14	10.0	10/04	0.25	19/10	2.5	0.86	0.29
		1999	746	115	281	144	1.12	5.3d	16/01	0.26	16/10	2.7	0.73	0.28
		2000	818	126	294	151	1.17	9.6	03/04	0.32	12/09	2.6	0.78	0.38
030001	**Witham at Claypole Mill** C.A: 297.9 km^2	**59..95**	**618**		**186**		**1.75**	**37.5**	**11/02/1977**	**0.02**	**24/07/1976**	**3.8**	**1.07**	**0.35**
M.A: EA	Local No: S/full: 43.0m^3s^{-1}													
F.A.R: RPE	Level: 17m UE: .02 FAI: 0.979													
Comment: An old three level weir, total width of 24.99m converted to a standard broad-crested Lea design. Rated by c/m; no bypassing or drowning. Fairly insensitive but range and gauge quality good. Substantial modification of low flows by transfer to Rutland Water and PWS at Saltersford; >50% of low flows may be abstracted representing between 10 and 30% ADF. # The catchment is clay (50%) with limestone (40%) and gravel. Largely rural.		1996	446	72	97	52	0.91	5.7	12/02	0.22	23/07	1.8	0.63	0.27
		1997	660	107	153	82	1.45	7.3	19/12	0.36	30/05	2.7	1.12	0.52
		1998	720	117	283	152	2.67	24.6	25/12	0.62	09/08	5.3	1.93	0.73
		1999	696	113	273	147	2.58	23.1	10/03	0.60	12/09	5.7	1.65	0.72
		2000	803	130	316	170	2.97	31.1	06/11	0.69	12/09	6.3	1.89	0.81
030033	**Brant at Brant Broughton** C.A: 65.8 km^2	**90..95**	**555**		**91**		**0.19**	**14.6**	**25/01/1995**	**>0.00**	**01/09/1991**	**0.4**	**0.04**	**>0.00**
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 10m UE: FAI:													
Comment: Crump profile Flat V (1:10) weir, 6m wide, set in vertical wingwalls 1.5m high. U/s and sidewall tappings for non-modular flow estimation (not used). Channel u/s formed by training banks circa 1m higher than walls. Station under investigation. # Low relief catchment to W of Lincoln Edge. Geology: Lower Lias clays and subordinate l'sts with some Middle Lias on eastern watershed. Broad band of river sands and gravels forms much of western catchment. Wholly rural; agricultural land use and disused airfield.		1996	439	79											
		1997	597	108										
		1998	660	119	142	156	0.30	13.8	10/04	0.01	21/08	0.7	0.09	0.01
		1999	656	118	147	162	0.31	15.1	09/03	0.01	11/09	0.7	0.08	0.02
		2000	758	137										
030013	**Heighington Beck at Heighington** C.A: 21.2 km^2	**76..95**	**604**		**187**		**0.13**	**1.2**	**13/02/1977**	**>0.00**	**26/08/1976**	**0.3**	**0.08**	**0.02**
M.A: EA	Local No: Sens.: 61.1 S/full: 8.8m^3s^{-1}													
F.A.R: GI	Level: 11m UE: .07 FAI: 0.976													
Comment: Crump profile weir 3.51m wide with theoretical calibration. Expected to drown at high flows. Summer low flows may be heavily influenced by gw abstraction for irrigation. # Very slow responding, permeable (98% l'st) rural catchment.		1996	461	76	104	56	0.07	0.4	19/12	0.01	27/07	0.1	0.05	0.01
		1997	611	101	142	76	0.10	0.6	28/12	0.03	09/06	0.2	0.08	0.04
		1998	659	109										
		1999	682	113	*232*	124	0.16					0.4	0.10	0.03
		2000	772	128	264	141	0.18	1.0	11/11	0.03	13/09	0.4	0.11	0.04
030012	**Stainfield Beck at Creampoke Farm** C.A: 37.4 km^2	**70..95**	**621**		**207**		**0.25**	**21.5**	**21/01/1985**	**0.00**	**02/09/1991**	**0.6**	**0.10**	**0.01**
M.A: EA	Local No: Sens.: 63.6 S/full: 9.2m^3s^{-1}													
F.A.R: N	Level: 8m UE: .01 FAI: 1.000													
Comment: Before 1998, compound Crump profile weir with (non-processed) crest tapping which became non-modular above about 2 m^3s^{-1}. Central weir 1.225m wide, total width 5.791m. Divide piers lowered in 1986 to stop debris entrapment. Replaced by 8m wide Flat V with crest tapping. No major abstractions or returns. # Flat, rural catchment underlain by Kimmeridge Clay.		1996	532	86	92	44	0.11	*4.4*	*19/12*	>0.00	22/07	0.2	0.03	0.01
		1997	642	103										
		1998	731	118										
		1999	695	112	180	87	0.21	*5.9*	*15/01*	0.00	04/06	0.6	0.08	
		2000	815	131	250	121	0.30	5.9	06/11	0.01	24/08	0.7	0.12	0.01
030002	**Barlings Eau at Langworth Bridge** C.A: 210.1 km^2	**60..95**	**609**		**193**		**1.28**	**36.3**	**21/01/1985**	**>0.00**	**26/08/1976**	**3.2**	**0.48**	**0.04**
M.A: EA	Local No: 30902 Sens.: 29.6 B/full: 22.5m^3s^{-1}													
F.A.R: GI	Level: 4m UE: .02 FAI: 0.984													
Comment: A natural section was replaced in Nov 1965 by a low flow compound Crump profile weir, which ceased operating in Sept 1978. The present Flat V weir has been operating since June 1980 and the theoretical rating is confirmed by check gaugings. Structure drowns at about 19 m^3s^{-1}. Irrigation abstractions reduce summer low flows. # Mostly Boulder Clay with some limestone in the headwaters. Flat and predominantly rural but with some new urban development.		1996	499	82	65	34	0.43	15.6	19/12	0.02	21/08	1.0	0.14	0.03
		1997	600	99	133	69	0.89	19.7	19/12	0.08	02/06	1.6	0.31	0.11
		1998	684	112	277	144	1.84	31.9	18/01	0.03	22/08	5.2	0.63	0.07
		1999	679	111	285	148	1.90	31.8	16/01	0.06	11/09	6.1	0.65	0.08
		2000	797	131	436	226	2.90	31.9	11/11	0.07	12/09	8.1	0.88	0.10
030011	**Bain at Goulceby Bridge** C.A: 62.5 km^2	**71..95**	**676**		**174**		**0.34**	**16.4**	**26/04/1981**	**0.02**	**01/09/1991**	**0.7**	**0.22**	**0.06**
M.A: EA	Local No: Sens.: 31.6 S/full: 30.0m^3s^{-1}													
F.A.R: SGI	Level: 52m UE: <.01 FAI: 0.962													
Comment: Free-fall drop under bridge calibrated by c/m until Dec 1969 and standard full-range Crump profile weir (crest length 4.877m) since Aug 1971 (no records between). Abstraction for irrigation could have significant effect on low flows in dry summers. # Rural catchment underlain by Chalk (50%) and s'st (20%) on the scarp slope of the Lincolnshire Wolds.		1996	593	88	68	39	0.14	2.2	20/12	0.03	19/08	0.3	0.10	0.03
		1997	686	101	93	53	0.18	1.3	19/12	0.06	11/08	0.3	0.13	0.07
		1998	812	120	193	111	0.38	2.6	18/01	0.09	13/08	0.8	0.30	0.10
		1999	752	111	187	107	0.37	2.6	09/03	0.08	02/08	0.9	0.26	0.09
		2000	894	132	270	155	0.53	4.4	06/11	0.12	12/09	1.1	0.36	0.14
030003	**Bain at Fulsby Lock** C.A: 197.1 km^2	**62..95**	**661**		**202**		**1.26**	**57.0**	**26/04/1981**	**>0.00**	**01/07/1976**	**2.9**	**0.66**	**0.11**
M.A: EA	Local No: Sens.: 24.2 B/full: 42.0m^3s^{-1}													
F.A.R: SPI	Level: 10m UE: .01 FAI: 0.969													
Comment: Broad-crested weir 4.6m wide situated in old lock; rated by model tests. Small bypass channel u/s feeds original river course and a disused model flume, gauged by sharp-crested weir. Flows over bypass not processed since 1981 and subsequent low flows therefore underestimated. Revesby Reservoir has a very minor influence, and abstractions for irrigation may be significant in dry summers. # Rural catchment, mostly clay with Chalk and s'st in the headwaters.		1996	550	83	85	42	0.53	12.8	19/12	0.03	24/07	1.3	0.25	0.06
		1997	669	101	125	62	0.78	10.6	19/12	0.07	21/08	1.6	0.45	0.13
		1998	773	117	241	119	1.51	14.7	03/01	0.13	19/08	3.6	0.82	0.17
		1999	726	110	218	108	1.36	15.7	16/01	0.05	04/08	3.6	0.84	0.11
		2000	833	126	304	150	1.89	20.3	06/11	0.17	13/09	4.3	1.11	0.25
030006	**Slea at Leasingham Mill** C.A: 48.4 km^2	**74..95**	**608**		**339**		**0.52**	**12.6d**	**01/05/1990**	**0.00**	**01/12/1995**	**1.5**	**0.26**	
M.A: EA	Local No: Sens.: S/full: 2.1m^3s^{-1}													
F.A.R: PGI	Level: 12m UE: .03 FAI: 0.968													
Comment: Rectangular thin-plate weir 1.372m wide set in old gate site, modified in 1984. Theoretical rating, with section above thin-plate treated as broad-crested weir. No drowning. Gw abstraction has potential for reducing summer low flows. # Unresponsive catchment, predominatly l'st and rural.		1996	446	73	86	25	0.13	0.9	11/03	0.00	01/08	0.5	0.02	
		1997	637	105	98	29	0.15	1.1	31/12	0.00	27/01	0.3	0.03	
		1998	706	116	516	152	0.79	2.9	18/01	0.02	15/10	1.8	0.66	0.03
		1999	712	117	*568*	168	0.87					2.2	0.49	0.08
		2000	771	127	611	180	0.93	3.1	07/12	0.09	13/09	2.5	0.68	0.15

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
030014	**Pointon Lode at Pointon** C.A: 11.9 km^2	**72..95**	**585**		**188**		**0.07**	**4.9**	**08/03 1975**	**0.00**	**01/10 1995**	**0.2**	**0.04**	**>0.00**
M.A: EA	Local No: Sens.: S/full: 5.7m^3s^{-1}													
F.A.R: I	Level: 3m UE: <.01 FAI: 1.000													
Comment: Crump profile weir 2.445m wide with theoretical calibration. Expected to drown at high flows. Abstractions for irrigation have minor effect on summer low flows. # Drainage channel in low lying area draining highland limestone, although latter outcrops over only 21% of catchment: rest covered by Boulder Clay.		1996	442	75	53	28	0.02	0.9	09/01	0.00	22/07	0.1	0.01	
		1997	692	118	137	73	0.05	4.2	28/06	>0.00	07/06	0.1	0.02	0.01
		1998	696	119	287	153	0.11	5.6	02/01	0.01	29/08	0.2	0.07	0.01
		1999	709	121	299	159	0.11	5.6	09/03	>0.00	19/04	0.2	0.06	0.01
		2000	769	131	295	157	0.11	3.6	28/05	>0.00	02/09	0.3	>0.00	>0.00
031022	**Jordan at Market Harborough** C.A: 20.8 km^2	**70..95**	**649**		**94**		**0.06**	**1.1**	**20/12 1972**	**0.00**	**01/09 1995**	**0.2**	**0.02**	**>0.00**
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 75m UE: FAI:													
Comment: Simple Crump profile weir, crest 1.47m broad. Rated up to 0.354m (0.673 m^3s^{-1}). Low flows only. Post-1996 flows truncated.		1996	505	78	256	272	0.17	15.3	09/01	>0.00	16/07	0.1	>0.00	>0.00
		1997	676	104	*106*	113	0.07					0.2	0.03	0.01
		1998	789	122	196	209	0.13	0.7	13/12	0.01	19/08	0.4	0.05	0.01
		1999	777	120	199	212	0.13	0.7	30/12	>0.00	27/07	0.4	0.05	0.01
		2000	856	132	237	252	0.16	0.7	01/12	>0.00	30/08	0.5	0.07	0.01
031021	**Welland at Ashley** C.A: 250.7 km^2	**70..95**	*654*		**153**		**1.21**	**39.6**	**02/02 1979**	**0.03**	**25/08 1976**	**3.3**	**0.51**	**0.13**
M.A: EA	Local No: Sens.: 32.4 B/full: 22.1m^3s^{-1}													
F.A.R: REI	Level: 56m UE: <.01 FAI: 0.993													
Comment: Crump profile weir in realigned channel beneath bridge. Weir has crest length of 6.97m and is theoretically calibrated to wing wall height with rated section above. Flows above 22 m^3s^{-1} - including all floods - influenced by bridge soffit and are therefore unreliable. Abstractions for irrigation and reservoir for maintenance of canal flow. # Largely rural with Market Harborough in headwaters: 85% Boulder Clay.		1996	466	71	79	52	0.63	15.3	09/01	0.09	25/09	1.5	0.25	0.10
		1997	656	100	93	61	0.74	14.4	29/11	0.11	10/08	1.6	0.34	0.14
		1998	756	116	241	158	1.92	22.0	05/01	0.14	10/08	4.4	0.75	0.18
		1999	756	116	237	155	1.88	22.0	25/12	0.12	12/09	4.8	0.69	0.14
		2000	839	128	318	208	2.52	22.1	11/10	0.16	13/09	6.5	1.00	0.19
031007	**Welland at Barrowden** C.A: 411.6 km^2	**68..95**	**649**		**177**		**2.32**	**107.8**	**10/03 1975**	**0.03**	**19/08 1972**	**5.3**	**0.94**	**0.22**
M.A: EA	Local No: Sens.: 13.5													
F.A.R: SEI	Level: 35m UE: FAI:													
Comment: Crump weir 3.04m wide measures flows to 4.2 m^3s^{-1}. Higher flows bypass weir via syphon and are measured d/s at Tixover (31005). Tixover is a rated section about 18m wide with rating depending on position of d/s sluices: assumed open in floods. Very high Tixover flows possibly influenced by overbank spillage u/s. Eye Brook reservoir has little influence, but low flows reduced by abstractions. # Mostly Boulder Clay overlying l'st. Rural catchment.		1996	462	71	76	43	0.99	17.1	09/01	0.16	22/07	2.3	0.43	0.19
		1997	656	101	*80*	45	1.05					2.8	0.56	0.27
		1998	758	117	151	85	1.97	4.3	09/12	0.28	19/08		1.30	0.32
		1999	754	116	148	84	1.94	4.3	30/12	0.26	28/07		1.39	0.31
		2000	844	130	181	102	2.35	*4.3*	*01/12*	0.29	16/08		2.00	0.32
031010	**Chater at Fosters Bridge** C.A: 68.9 km^2	**68..95**	**661**		**236**		**0.51**	**20.8**	**15/08 1980**	**0.02**	**16/08 1976**	**1.2**	**0.26**	**0.06**
M.A: EA	Local No: Sens.: S/full: 19.2m^3s^{-1}													
F.A.R: N	Level: 38m UE: <.01 FAI: 0.998													
Comment: Compound Crump profile weir with theoretical calibration. Central weir 1.054m wide, total width 6.077m. Not drowned but possibly bypassed in very extreme floods. No major abstractions or returns. # Rural catchment. Geology variable -includes clay (75%), limestone (13%) and sandstone (9%).		1996	470	71	113	48	0.25	3.9	09/01	0.06	19/08	0.5	0.15	0.06
		1997	671	102	151	64	0.33	3.9	18/12	0.07	10/08	0.7	0.20	0.08
		1998	778	118	315	133	0.69	18.1	10/04	0.14	12/08	1.4	0.35	0.16
		1999	755	114	289	122	0.63	12.1	16/01	0.15	01/08	1.4	0.35	0.17
		2000	851	129	371	157	0.81	19.0	06/11	0.12	06/08	1.8	0.42	0.17
031025	**Gwash South Arm at Manton** C.A: 24.5 km^2	**78..95**	**691**		**246**		**0.19**	**22.5**	**02/06 1981**	**>0.00**	**01/09 1991**	**0.5**	**0.05**	**0.01**
M.A: EA	Local No: Sens.: 50.0 S/full: 16.1m^3s^{-1}													
F.A.R: NI	Level: 84m UE: <.01 FAI: 0.995													
Comment: Flat V weir (crest length 5m) measuring inflows to Rutland Water. Weir is theoretically calibrated and never drowns, although is bypassed at high flows. No abstractions, small returns. # Rural catchment on Boulder Clay.		1996	476	69	96	39	0.07	3.0	09/01	>0.00	21/07	0.2	0.02	
		1997	709	103										
		1998	826	120	330	134	0.26	16.9	02/01	0.01	11/08	0.6	0.06	0.01
		1999	776	112	274	111	0.21	12.2	15/01	0.01	31/07	0.6	0.07	0.01
		2000	835	121	356	145	0.28	16.8	05/11	0.01	09/09	0.8	0.08	0.01
031026	**Egleton Brook at Egleton** C.A: 2.5 km^2	**78..95**	**680**		**240**		**0.02**	**1.7**	**11/06 1993**	**0.00**	**01/08 1995**	**0.0**	**0.01**	
M.A: EA	Local No: Sens.: S/full: 3.6m^3s^{-1}													
F.A.R: N	Level: 84m UE: <.01 FAI: 1.000													
Comment: Flat V weir 2m wide measuring inflows to Rutland Water. Theoretically rated, but could drown at high flows due to sharp bend d/s and weed growth. No abstractions or returns - sensibly natural regime. # Rural catchment on Boulder Clay.		1996	482	71	87	36	0.01	0.3	11/02	0.00	13/07	0.0	0.00	
		1997	687	101	216	90	0.02	0.8	26/06	>0.00	16/08	0.0	>0.00	>0.00
		1998	778	114	353	147	0.03	1.5	27/10	0.00	05/08	0.1	0.01	
		1999	773	114	346	144	0.03	**1.7**	**25/08**	0.00	24/07	0.1	>0.00	>0.00
		2000	815	120	419	175	0.03	**2.3**	**05/11**	0.00	05/08	0.1	0.01	
031016	**North Brook at Empingham** C.A: 36.5 km^2	**69..95**	**628**		**205**		**0.24**	**1.9**	**25/02 1977**	**0.03**	**13/08 1976**	**0.5**	**0.18**	**0.07**
M.A: EA	Local No: Sens.:													
F.A.R: SI	Level: 50m UE: FAI:													
Comment: Simple Crump profile weir, crest 2.36m broad. Rated up to 0.584m (2.503 m^3s^{-1}). Low flows only. Catchment contains two artificial lakes. # Geology: virtually drift free Lincolnshire Limestone; Boulder Clay on highest ground. Entirely rural catchment with small wooded areas.		1996	458	73	102	50	0.12	0.3	11/03	**0.02**	**31/10**	0.2	0.11	0.04
		1997	681	108										
		1998	745	119										
		1999	742	118	328	160	0.38	1.5d	03/04	0.14	25/05	0.9	0.24	0.15
		2000	796	127	296	144	0.34	1.2	06/11	0.14	04/09	0.6	0.28	0.16
031006	**Gwash at Belmesthorpe** C.A: 150.0 km^2	**67..95**	**637**		**165**		**0.79**	**40.7**	**09/12 1969**	**0.15**	**06/09 1976**	**1.5**	**0.63**	**0.29**
M.A: EA	Local No: Sens.: 23.0 S/full: 24.0m^3s^{-1}													
F.A.R: SRP	Level: 24m UE: .01 FAI: 0.758													
Comment: Full-range Crump profile weir (crest length 8.5m) with no drowning problems. Site is 13km d/s of Rutland Water and flows have been very significantly influenced since 1975. Flows also affected by Gwash-Glen transfer scheme. # 51% clay and 40% l'st.		1996	462	73	83	50	0.39	1.5	26/01	0.23	04/10	0.5	0.37	0.29
		1997	680	107	89	54	0.42	0.9	18/12	0.28	02/06	0.6	0.39	0.33
		1998	759	119	152	92	0.72	2.4	10/04	0.26	19/10	1.3	0.62	0.30
		1999	742	116	164	99	0.78	2.3	16/01	0.33	20/10	1.6	0.55	0.36
		2000	809	127	160	97	0.76	2.1	08/12	0.29	06/10	1.5	0.65	0.34
031004	**Welland at Tallington** C.A: 717.4 km^2	**67..95**	**646**		**181**		**4.11**	**77.3d**	**10/03 1975**	**0.01**	**03/10 1995**	**9.3**	**2.37**	**0.65**
M.A: EA	Local No: 31804 Sens.:													
F.A.R: SPEI	Level: m UE: .01 FAI: 0.926													
Comment: Flows measured over broad-crested weir (total width 28.35m) on main river and two Crump profile weirs (both with 6.1m crest length) on West Deeping and Lolham Mill streams. Total flow is sum of three. Weir at Lolham drowns in summer due to weeds, and true flows estimated. Significant quantities of water abstracted u/s for transmission to Rutland Water with significant effect on low flows. # Gauging site where river becomes Fenland river. Rural catchment, largely clay, containing Rutland Water (controls 11%).		1996	465	72	65	36	1.46	10.5d	25/02	0.48	12/10	2.0	1.22	0.70
		1997	666	103	71	39	1.62	14.1d	30/11	0.09	10/12	2.5	1.18	0.89
		1998	760	118	192	106	4.37	**77.4d**	11/04			9.7	2.10	0.14
		1999	746	115	125	69	2.85	29.0	18/04			8.9	0.94	0.18
		2000	834	129	214	118	4.86	**80.3**	07/11			14.5	1.54	0.33
031023	**West Glen at Easton Wood** C.A: 4.4 km^2	**72..95**	**646**		**158**		**0.02**	**7.8**	**14/08 1980**	**0.00**	**01/12 1995**	**0.1**		
M.A: EA	Local No: Sens.: S/full: 10.7m^3s^{-1}													
F.A.R: N	Level: 81m UE: <.01 FAI: 1.000													
Comment: Flat V weir with crest length of 8.05m theoretically rated to 10.7 m^3s^{-1}. Installed as part of study into recharge of Lincolnshire L'st. No abstractions or returns. # Rural catchment entirely on Boulder Clay: flows disappear into l'st d/s of gauging station.		1996	457	71	59	37	0.01	0.5	19/12	0.00	23/01	0.0		
		1997	721	112	131	83	0.02	1.1	08/10	0.00	27/03	0.1	0.00	
		1998	743	115	222	141	0.03	5.4	10/04	0.00	18/05	0.1	0.00	
		1999	755	117	201	127	0.03	2.4	15/01	0.00	17/05	0.1	0.00	
		2000	825	128	253	160	0.04	2.5	05/11	0.00	13/05	0.1	0.01	

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
031024 Holywell Brook at Holywell C.A: 22.3 km^2	**71..95**	**607**		**163**		**0.12**	**1.7**	**09/02 1974**	**0.00**	**07/11 1990**	**0.2**	**0.09**	**0.01**
M.A: EA Local No: Sens.:													
F.A.R: G Level: 27m UE: FAI:													
Comment: Crump weir, 2.498m wide. Calibrated up to around 1.8 cumecs only. Baseflow dominated flow regime. # Geology: Jurassic l'st with some drift cover. Land use: rural with some woodland.	1996	455	75	70	43	0.05	1.0	12/02	0.01	13/11	0.1	0.05	0.01
	1997	701	115	89	55	0.06	1.8	**09/10**	0.02	09/01	0.1	0.05	0.02
	1998	744	123	289	177	0.20	1.8	09/04	0.01	06/10	0.3	0.16	0.07
	1999	732	121	280	172	0.20	1.8	20/04	0.05	18/11	0.4	0.15	0.06
	2000	770	127	277	170	0.20	1.8	25/12	0.05	27/09	0.4	0.13	0.06
031013 East Glen at Irnham C.A: 71.5 km^2	**69..95**	**612**		**47**		**0.11**	**13.5**	**15/08 1980**	**0.00**	**03/08 1995**	**0.3**	**0.03**	
M.A: EA Local No: Sens.:													
F.A.R: G Level: 42m UE: FAI:													
Comment: Flat V weir replaced simple Crump profile weir in Nov 1977. Currently low flows only – to 2 cumecs. # N-S trending catchment of subdued relief. Geology: Upper Jurassic Oxford Clay in lower catchment overlying Cornbrash and Oolite Series of Mid Jurassic. Predominantly drift free. Entirely rural.	1996	448	73	22	47	0.05	2.0	12/02	0.00	22/07	0.1	>0.00	>0.00
	1997	689	113	70	149	0.16	2.0	18/12	>0.00	02/06	0.4	0.04	0.01
	1998	736	120	85	181	0.19	2.0	15/04	0.01	05/08	0.5	0.06	0.01
	1999	731	119	83	177	0.19	2.0	28/01	>0.00	27/07	0.5	0.06	0.01
	2000	811	133	113	240	0.25	2.0	11/10	0.01	06/08	0.7	0.09	0.01
031002 Glen at Kates Br and King St Br C.A: 341.9 km^2	**60..95**	**621**		**110**		**1.19**	**23.6d**	**27/04 1981**	**0.00**	**01/08 1976**	**2.8**	**0.54**	**0.04**
M.A: EA Local No: 31802 Sens.: 68.0													
F.A.R: GI Level: 6m UE: <.01 FAI: 0.983													
Comment: Broad-crested weir replaced Nov 1971 by 9.7m wide Flat V weir at Kates Bridge, plus standing-wave flume at King Street. US gauge for high flows installed at Kates Bridge 1999. All recorded flows within modular limits. The Glen is influent in upper reaches. Low flows reduced by irrigation abstractions, influenced by pumping from gravel works and groundwater abstraction outside the catchment. Flows also affected by Gwash-Glen transfer scheme since 1989. # Glen becomes a Fenland river below the gauging stations. Rural catchment, clay 59% and limestone 30% in headwaters.	1996	446	72	27	25	0.29	6.6	09/01	0.03	16/09	0.6	0.13	0.07
	1997	692	111	45	41	0.49	8.1	30/11	0.03	10/06	1.4	0.14	0.05
	1998	737	119	146	133	1.59	17.8	10/04	0.13	29/09	3.6	1.02	0.16
	1999	718	116	139	126	1.51	14.8d	10/03	0.16	18/09	3.7	0.88	0.20
	2000	790	127	156	142	1.69	17.8	06/11	0.15	13/09	4.1	0.89	0.21
032008 Nene/Kislingbury at Dodford C.A: 107.0 km^2	**45..95**	**672**		**180**		**0.61**	**11.6**	**01/05 1983**	**0.04**	**07/09 1949**	**1.4**	**0.34**	**0.11**
M.A: EA Local No: Sens.: 20.8 S/full: 10.0m^3s^{-1}													
F.A.R: E Level: 79m UE: .02 FAI: 0.982													
Comment: Crump profile weir with 2.667m crest replaced broad-crested weir with low flow notch in 1967. Weir theoretically calibrated, but bypassing begins at 7 m^3s^{-1} and the weir drowns in high flows. Low flows influenced by returns from STW. # Mostly clay (73%) and predominantly rural.	1996	463	69	104	58	0.35	6.1	12/02	0.11	05/08	0.7	0.22	0.13
	1997	642	96	107	59	0.36	5.1	28/11	0.12	04/08	0.7	0.22	0.14
	1998	728	108	256	142	0.87	11.6	10/04	0.16	19/08	1.9	0.49	0.17
	1999	743	111	252	140	0.86	10.1	24/12	0.19	28/07	1.9	0.50	0.21
	2000	836	124	312	173	1.05	11.3	06/11	0.19	13/09	2.5	0.57	0.22
032006 Nene/Kislingbury at Upton C.A: 223.0 km^2	**39..95**	*667*		**195**		**1.38**	**38.2d**	**17/03 1947**	**0.06**	**28/09 1944**	**2.9**	**0.78**	**0.25**
M.A: EA Local No: 32806 Sens.: 20.5													
F.A.R: E Level: 62m UE: .01 FAI: 0.986													
Comment: Main channel flow measured in 3.2m wide standing wave flume under mill. Flow in bypass channel measured at Crump profile weir (crest 6.12m) since 1969 and flows summed to produce total. Before 1969 flows through bypass controlled by broad-crested weir with no recorder, and total flows based on average relationship between levels in main channel and bypass. Very high flows bypass both channels. No major abstractions but several sewage work returns. # Mostly clay (72%) and predominantly rural.	1996	464	70	98	50	0.69	4.6	12/02	0.27	19/08	1.2	0.51	0.29
	1997	639	96	107	55	0.76	6.5d	29/11	0.25	08/08	1.5	0.48	0.29
	1998	750	112	217	111	1.54	13.2d	03/01	0.39	24/09	2.9	1.05	0.43
	1999	739	111	164	84	1.16	6.0	20/01	0.38	28/07	2.2	0.95	0.42
	2000	838	126	196	101	1.38	6.0	08/12	0.43	12/09	2.7	1.14	0.49
032007 Nene Brampton at St Andrews C.A: 232.8 km^2	**39..95**	*660*		**157**		**1.16**	**30.0**	**15/08 1980**	**0.01**	**12/08 1944**	**2.5**	**0.62**	**0.21**
M.A: EA Local No: 32807 Sens.: 25.8													
F.A.R: SPEI Level: 59m UE: .02 FAI: 0.919													
Comment: Main channel flow measured in 2.743m wide standing-wave flume in mill race. Flow in bypass channel measured at 9.11m wide broad-crested weir and flows summed to produce total. No recorder on bypass before 1969, and total flows estimated using average relationship between levels in flume and bypass. Bypassing of both structures commences at about 17 m^3s^{-1}. Abstraction from three water supply reservoirs reduce low flows. # Mostly clay (76%) and predominantly rural.	1996	477	72	70	45	0.52	2.2	12/02	0.25	16/10	0.8	0.47	0.29
	1997	657	100	100	64	0.74	7.4d	29/11	0.09	30/10	1.3	0.50	0.25
	1998	756	115	171	109	1.26	24.5d	10/04	0.28	22/08	2.2	0.83	0.33
	1999	767	116										
	2000	837	127	146	93	1.07	6.3	06/11	0.37	30/08	1.8	0.90	0.41
032019 Slade Brook at Kettering C.A: 58.3 km^2	**70..95**	**629**		**175**		**0.32**	**3.7**	**01/02 1995**	**0.02**	**25/08 1976**	**1.1**	**0.15**	**0.04**
M.A: EA Local No: 32033 Sens.:													
F.A.R: SEI Level: 56m UE: FAI:													
Comment: Full-range Flat V weir. Replaced low flow simple Crump profile weir (crest 2.42m broad, rated up to 0.3m: 0.848 m^3s^{-1}) in early 1988, following river improvements. Low flow station only prior to 1988. No data 1988-1995. # Catchment is 48% clay and 48% s'st. Kettering lies within the catchment.	1996	497	79										
	1997	650	103	179	102	0.33	4.2	28/06	0.04	18/08	0.8	0.15	0.06
	1998	776	123	445	254	0.82	28.6	10/04	0.07	13/08	1.6	0.56	0.08
	1999	763	121	429	245	0.79	*6.6*	*01/06*	0.08	08/09	1.7	0.62	0.11
	2000	861	137	350	200	0.65	9.9	05/11	0.08	09/08	1.3	0.46	0.11
032004 Ise Brook at Harrowden Old Mill C.A: 194.0 km^2	**43..95**	**641**		**219**		**1.35**	**28.4**	**17/03 1947**	**0.05**	**11/08 1944**	**3.0**	**0.73**	**0.19**
M.A: EA Local No: Sens.: 58.3 S/full: 26.0m^3s^{-1}													
F.A.R: SI Level: 45m UE: .04 FAI: 0.980													
Comment: Flume with low flow notch and side weir to 1965, compound Crump profile weir to April 1976, and theoretically-rated Flat V weir with 5.15m crest since. Crump weir modular to 15.6 m^3s^{-1} (but bypassed at 14.2). Flat V also bypassed. Two small storage reservoirs with minor influence on low flows; receives Kettering effluent. # Underlain by clay (59%) and sandstone (24%), mostly rural but includes Kettering.	1996	497	78	114	52	0.70	8.1	25/02	0.06	19/08	1.6	0.41	0.10
	1997	649	101	119	54	0.73	7.8	29/11	0.11	10/06	1.7	0.43	0.17
	1998	772	120	285	130	1.75	24.0	10/04	0.22	24/07	4.0	0.89	0.25
	1999	762	119	263	120	1.62	14.0	20/01	0.23	09/09	4.0	0.87	0.29
	2000	853	133	330	151	2.03	18.0	06/11	0.22	09/09	4.5	1.21	0.31
032003 Harpers Brook at Old Mill Bridge C.A: 74.3 km^2	**38..95**	**630**		**175**		**0.41**	**22.0**	**26/04 1981**	**0.01**	**26/08 1976**	**0.9**	**0.19**	**0.07**
M.A: EA Local No: Sens.: 16.3 S/full: 15.2m^3s^{-1}													
F.A.R: N Level: 30m UE: <.01 FAI: 1.000													
Comment: Compound Crump profile weir replaced rated section in 1964. Central crest 1.219m, total crest length 3.657m. Calibration confirmed to 4.8 m^3s^{-1}, but weir drowned around 7 m^3s^{-1} and was bypassed in extreme floods. Replaced 1998 by Flat V, 4.04m wide between existing wing walls, modular to 20 m^3s^{-1}. Catchment area increased by 8% after diversion from Willow Brook in 1963. # Low lying impervious catchment (clay 90%), predominantly agricultural, but with some ironstone mines working until early 1980s.	1996	482	77	88	50	0.21	6.0	09/01	0.06	19/08	0.4	0.12	0.07
	1997	636	101	90	51	0.21	3.6	18/12	0.06	05/10	0.5	0.11	0.07
	1998	785	125										
	1999	739	117	253	145	0.60	14.5	16/01	0.11	31/07	1.3	0.27	0.12
	2000	849	135	319	182	0.75	20.4	06/11	0.12	12/08	1.5	0.33	0.13
032002 Willow Brook at Fotheringhay C.A: 89.6 km^2	**38..95**	**616**		**276**		**0.78**	**15.0**	**17/03 1947**	**0.05**	**08/08 1944**	**1.3**	**0.63**	**0.25**
M.A: EA Local No: Sens.: 8.2 S/full: 7.4m^3s^{-1}													
F.A.R: SEI Level: 15m UE: .06 FAI: 0.908													
Comment: Flume (1.676m wide throat) with rating based on model tests. Bypassing occurs at 6.5 m^3s^{-1} and is not allowed for. Lost 4.66 sq.km. of catchment to Harpers Brook in 1963. Low flows significantly influenced by extractions for Corby steelworks (including imports from Eye Brook) until 1980. Three small reservoirs continue to have minor influence on low flows. # Underlain by clay (75%) in headwaters and l'st (16.5%). Mostly rural but includes Corby.	1996	458	74	189	68	0.54	3.9	09/01	0.25	02/08	0.8	0.46	0.31
	1997	635	103	208	75	0.59	3.6	27/06	0.27	23/10	1.0	0.47	0.33
	1998	751	122										
	1999	713	116										
	2000	816	132										
033018 Tove at Cappenham Bridge C.A: 138.1 km^2	**62..95**	**677**		**241**		**1.06**	**28.4**	**08/03 1975**	**0.07**	**24/08 1976**	**2.3**	**0.56**	**0.19**
M.A: EA Local No: Sens.: 12.0 B/full: 32.0m^3s^{-1}													
F.A.R: EI Level: 81m UE: <.01 FAI: 0.999													
Comment: Compound broad-crested trapezoidal weir, 7.6m broad; central notch, 2.7m broad. Theoretical rating since Aug 1970. Prior to that data hydraulic model derived rating. The weir is subject to drowning at high flows. # Geology: predominantly Chalk overlain with Boulder Clay. Land use: agricultural.	1996	490	72	142	59	0.62	9.7	09/01	0.12	03/08	1.3	0.35	0.17
	1997	635	94	109	45	0.48	5.5	25/12	0.12	20/08	1.0	0.27	0.14
	1998	851	126	320	133	1.40	**51.0**	**09/04**	0.20	18/08	2.9	0.74	0.26
	1999	781	115	284	118	1.25	30.4	20/01	0.22	02/08	2.8	0.72	0.28
	2000	837	124	338	140	1.47	25.9	29/10	0.23	03/09	3.4	0.85	0.27

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
033058	**Ouzel at Bletchley** C.A: 215.0 km^2	**78..95**	**674**		**288**		**1.96**	**43.8**	**23/09 1992**	**0.35**	**03/08 1990**	**3.9**	**1.25**	**0.52**
M.A: EA	Local No: Sens.: 9.3 S/full: 96.0m^3s^{-1}													
F.A.R: GEI	Level: 66m UE: .02 FAI: 0.994													
Comment: Flat V weir, 10m broad. Constructed to measure flows just u/s of urban development (Milton Keynes). In a country park and subject to vandalism. Small gw abstractions. Flows augmented by effluent from Leighton Buzzard. # Mixed geology - Upper Greensand and Oxford Clay. Land use: arable.		1996	452	67	167	58	1.13	14.6	24/02	0.38	28/08	2.0	0.74	0.44
		1997	524	78	98	34	0.67	4.1	25/02	0.33	15/08	1.1	0.56	0.36
		1998	823	122	326	113	2.22	33.8	09/04	0.49	15/08	4.4	1.16	0.55
		1999	661	98	*247*	86	1.69					3.7	1.03	0.53
		2000	848	126	408	142	2.77	37.8	30/10	0.59	13/09	5.8	1.47	0.66
033015	**Ouzel at Willen** C.A: 277.1 km^2	**62..95**	**657**		**233**		**2.05**	**34.0**	**26/12 1985**	**0.03**	**20/09 1980**	**4.5**	**1.19**	**0.47**
M.A: EA	Local No: Sens.: 8.9 S/full: 43.0m^3s^{-1}													
F.A.R: GEI	Level: 57m UE: .04 FAI: 0.979													
Comment: 10m wide Flat V Crump profile weir replaced compound broad-crested weir, 10m broad, in 1977 when river realigned. Radial lifting gate immediately u/s of weir diverts very high flows to adjacent balancing reservoir which empties d/s of weir. Annual floods do not bypass. # The river flows across the Greensand and Oxford Clay. Milton Keynes and Leighton Buzzard are the only towns in an otherwise rural catchment.		1996	453	69	146	63	1.28	16.0	24/02	0.38	22/07	2.2	0.81	0.43
		1997	530	81	92	39	0.80	5.6	25/02	0.32	16/08	1.4	0.63	0.36
		1998	815	124	278	119	2.44	27.5	09/04	0.44	13/08	5.2	1.30	0.52
		1999	667	102	222	95	1.95	17.5d	16/01	0.39	31/07	4.7	1.16	0.51
		2000	843	128	351	151	3.07	21.7d	30/10	0.61	13/09	7.4	1.73	0.71
033037	**Bedford Ouse at Newport Pagnell** C.A: 800.0 km^2	**69..95**	**659**		**192**		**4.87**	**74.8d**	**16/03 1982**	**0.10**	**25/08 1976**	**12.0**	**2.00**	**0.45**
M.A: EA	Local No: 33137 Sens.: 6.4 B/full: 71.0m^3s^{-1}													
F.A.R: PGEI	Level: 54m UE: .01 FAI: 0.951													
Comment: Compound Crump profile weir (29.3m broad), with crest tapping and central notch (3m broad). Separate, complementary Crump weir (3.7m broad), with crest tapping (local number 33237) constructed in old mill throttle, 7m u/s of a double arch culvert; subject to drowning at high flows. Abstractions for PWS approx. 25km u/s. # Predominantly pervious catchment (60%). Land use: arable and grassland.		1996	481	73	81	42	2.05	33.2	26/02	0.28	18/09	4.5	0.73	0.32
		1997	606	92	51	27	1.28	17.0d	25/12	0.20	18/08	3.1	0.63	0.27
		1998	824	125	205	107	5.21	66.0	09/04	0.41	20/08	15.0	1.99	0.49
		1999	721	109	153	80	3.87	47.5d	21/01	0.35	02/08	10.7	1.51	0.44
		2000	854	130	248	129	6.28	59.3d	31/10	0.47	13/09	17.5	2.47	0.55
033002	**Bedford Ouse at Bedford** C.A: 1460.0 km^2	**33-95**	*654*		**220**		**10.20**	**278.1d**	**15/03 1947**	**0.01**	**15/08 1934**	**26.6**	**4.81**	**0.98**
M.A: EA	Local No: Sens.:													
F.A.R: SPGEI	Level: 25m UE: .02 FAI: 0.954													
Comment: 3 broad-crested weirs, 30m, 20m and 12m wide + 3 vertical sluice gates (either fully open/closed). High flow rating confirmed by current meter measurements. Records before 1959 based on daily gauge-board levels and gate openings (limited accuracy, few hifs & many replicated dmfs). Recommended flow record, from 1972, from Roxton d/s (33039). Significant surface and groundwater abstractions in catchment for PWS, Milton Keynes' effluent now significant. # Geology: predominantly clay. Land use: agricultural with substantial urban development over last 25 years.		1996	468	72	159	72	7.33	67.8	27/02	1.64	27/09	15.5	3.89	1.92
		1997	575	88	110	50	5.08	77.5	25/11	1.28	20/08	10.7	3.44	1.71
		1998	805	123	347	158	16.08	251.0	11/04	2.24	15/08	38.8	9.08	2.67
		1999	687	105	255	116	11.80	67.6d	22/01	2.20	24/07	29.6	6.68	2.38
		2000	841	129	400	182	18.48	99.6d	02/11	2.80	18/08	47.0	10.64	3.33
033039	**Bedford Ouse at Roxton** C.A: 1660.0 km^2	**72..95**	**642**		**216**		**11.38**	**101.5**	**25/11 1974**	**0.21**	**25/08 1976**	**27.6**	**6.08**	**1.90**
M.A: EA	Local No: Sens.: 10.5 S/full: 122.0m^3s^{-1}													
F.A.R: PGEI	Level: 16m UE: .03 FAI: 0.956													
Comment: Flat V Crump profile weir (26m broad) with crest tapping, situated immediately u/s of confluence with R. Ivel. Drowns at very high flows (e.g. during exceptional Easter Floods 1998) and can spill on rare occasions. Adjacent lock acts as an overspill in flood conditions. Use in preference to Bedford (33002) if possible. Significant surface water and gw abstractions for PWS, industry and agriculture. One of 3 stations used to calculate Offord flows to determine abstraction regime at Grafham Water. # Geology: predominantly Clay. Land use: predominantly agricultural with substantial urban development (Milton Keynes).		1996	460	72	143	66	7.51	66.1	27/02	1.90	20/09	15.6	4.22	2.05
		1997	566	88	93	43	4.90	30.5d	26/12	1.44	20/08	10.0	3.56	1.82
		1998	795	124	*270*	125	14.21					35.4	8.27	2.71
		1999	674	105	219	101	11.54	62.6d	22/01	2.11	31/07	28.0	7.06	2.49
		2000	833	130	343	159	18.01	84.1d	02/11	2.98	13/08	46.4	10.36	3.37
033033	**Hiz at Arlesey** C.A: 108.0 km^2	**73..95**	**618**		**201**		**0.69**	**6.3**	**18/11 1974**	**0.20**	**27/08 1976**	**1.1**	**0.58**	**0.36**
M.A: EA	Local No: Sens.: S/full: 12.9m^3s^{-1}													
F.A.R: GEI	Level: 36m UE: .06 FAI: 0.994													
Comment: Crump profile weir, 7m broad. Subject to drowning at peak flows. Augmentation by effluent affects diurnal flow pattern. Significant gw abstractions for PWS. # Predominantly Chalk catchment. Land use: agricultural with significant urban development (Hitchin).		1996	418	68	150	75	0.51	2.8	09/01	0.31	30/10	0.7	0.44	0.34
		1997	507	82	101	50	0.34	1.8	26/06	0.24	09/09	0.4	0.33	0.26
		1998	750	121	168	84	0.58	4.4	09/04	0.30	30/08	1.0	0.45	0.31
		1999	575	93	171	85	0.59	3.8	16/01	0.32	07/09	1.0	0.45	0.33
		2000	842	136	228	113	0.78	4.3	30/10	0.38	12/09	1.5	0.56	0.41
033028	**Flit at Shefford** C.A: 119.6 km^2	**66..95**	**615**		**220**		**0.83**	**8.2**	**21/10 1987**	**0.14**	**24/08 1976**	**1.4**	**0.64**	**0.33**
M.A: EA	Local No: Sens.: 10.5 S/full: 5.8m^3s^{-1}													
F.A.R: GEI	Level: 37m UE: .03 FAI: 0.991													
Comment: Trapezoidal critical depth flume, 9.8m broad; 2.1m throat width. Structurefull 0.76m stage. Subject to drowning. Flows affected by u/s mill operation. Surface water abstraction for spray irrigation. Abstraction for PWS closed 1985. Flows augmented by effluent from Luton. # Geology: predominantly Greensand (60%). Land use: agricultural.		1996	421	68	198	90	0.75	5.5	09/01	0.41	16/07	1.0	0.66	0.46
		1997	495	80	160	73	0.61	2.0	24/02	0.39	13/08	0.8	0.57	0.42
		1998	763	124	267	121	1.01	8.2d	09/04	0.42	14/08	1.7	0.74	0.45
		1999	595	97	242	110	0.92	5.6d	16/01	0.43	28/07	1.5	0.71	0.50
		2000	834	136	326	148	1.23	8.0d	30/10	0.50	13/09	2.3	0.88	0.54
033022	**Ivel at Blunham** C.A: 541.3 km^2	**59..95**	*591*		**177**		**3.03**	**32.6**	**21/12 1960**	**0.41**	**19/08 1976**	**5.3**	**2.24**	**1.11**
M.A: EA	Local No: Sens.: 8.6 S/full: 35.0m^3s^{-1}													
F.A.R: GEI	Level: 19m UE: .04 FAI: 0.987													
Comment: Crump profile weir 7.31m wide. Drowning occurs at 0.91m (rating includes drowning correction). Significant bypassing when stage exceeds 1.1m; 'truncation' effect evident in annual maxima series. Hydrograph reflects u/s mill operation. Effluent from STW has substantial effect on low flows. Many abstractions for spray irrigation. Groundwater abstractions for PWS. One of 3 stations used to calculate Offord flows to determine abstraction regime at Grafham Water. # The Ivel rises near Hitchin and flows north across Greensand, Chalk and Gault Clays to meet the Great Ouse south of Bedford. Predominantly rural land use.		1996	403	68	111	63	1.90	15.4	09/01	0.80	21/07	3.1	1.41	0.93
		1997	488	83	69	39	1.18	4.9	27/06	0.59	20/08	1.7	1.11	0.67
		1998	736	125	163	92	2.79	29.0	09/04	0.88	19/08	5.3	1.81	0.95
		1999	571	97	141	80	2.43	16.0	16/01	0.89	03/08	4.4	1.74	1.01
		2000	821	139	222	125	3.80	26.8	04/04	1.12	13/09	8.1	2.33	1.22
033012	**Kym at Meagre Farm** C.A: 137.5 km^2	**60..95**	*609*		**145**		**0.63**	**34.0**	**21/12 1960**	**0.00**	**22/08 1976**	**1.5**	**0.12**	**0.02**
M.A: EA	Local No: Sens.: 66.0 B/full: 49.0m^3s^{-1}													
F.A.R: EI	Level: 17m UE: <.01 FAI: 0.992													
Comment: Compound weir with triangular profile centre section 3m wide and broad-crested flanks in a trapezoidal channel, 8.5m wide. Rating modified to correct for drowning by weed growth using tailwater levels. Pre-1978 flows under review. Ultrasonic mounted on bridge just downsteam (start date being confirmed). Predominantly natural regime, modest abstractions for agriculture. One of 3 stations used to calculate Offord flow to determine abstraction regime at Grafham Water. # Geology: predominately clay catchment - very flashy by Anglian standard. Land use: agricultural.		1996	448	74	96	66	0.42	19.7	09/01	0.02	18/09	0.8	0.06	0.03
		1997	523	86	24	17	0.10	2.0	19/12	0.01	20/08	0.2	0.05	0.02
		1998	725	119	178	123	0.78	25.6	10/04	0.01	21/08	1.9	0.16	0.03
		1999	633	104	114	79	0.49	11.7	16/01	0.02	10/09	1.3	0.10	0.03
		2000	792	130	228	157	0.99	11.2	31/12	0.02	16/08	2.6	0.31	0.03
033026	**Bedford Ouse at Offord** C.A: 2570.0 km^2	**70..95**	*620*		**174**		**14.14**	**148.4d**	**22/11 1974**	**0.51**	**27/08 1976**	**35.0**	**6.66**	**2.08**
M.A: EA	Local No: Sens.: 5.7													
F.A.R: SPGEI	Level: 11m UE: FAI:													
Comment: Complex of automatic radial tilting gate, 15.2m broad; triangular profile weir, 14.8m broad; compound broad-crested weir, 22.7m broad. Navigation lock opened at flows above 40 m^3s^{-1}. Easter 1998 flood >125 cumecs. Abstraction 2km u/s for Grafham Water Res. (approx. 2 m^3s^{-1}). Substantial surface water abstractions for PWS, industry and agriculture. Significant gw abstractions. # Geology: predominantly Chalk. Land use: mostly agricultural with substantial urban areas (Milton Keynes).		1996	443	71	98	56	7.99	81.6d	25/02	1.42	16/08	18.1	3.31	1.95
		1997	540	87	47	27	3.85	32.0d	26/12	0.67	28/05	8.1	2.51	1.64
		1998	767	124										
		1999	639	103	158	91	12.88	74.0d	18/01	0.89	13/09	35.0	7.52	1.96
		2000	822	133										
033020	**Alconbury Brook at Brampton** C.A: 201.5 km^2	**63..93**	**594**		**118**		**0.76**	**36.6**	**20/12 1976**	**0.00**	**01/09 1991**	**2.1**	**0.14**	**0.01**
M.A: EA	Local No: 33080 Sens.: 74.1 B/full: 42.5m^3s^{-1}													
F.A.R: EI	Level: 9m UE: .01 FAI: 1.000													
Comment: Flat V CP weir in trapezoidal channel, plus ultrasonic for use when head above crest>1m., replaced (from 3/6/95) broad-crested weir with central low flow notch (closed in Sep 1993). Theoretical rating but hydraulic model calibration for flanks prior to Apr 1978. 1978-93 peak flows under review. Drowns at approx. 1m stage; spills at 2m. Pre 1993 rating modified by c/m measurement to correct for drowning. High flows impeded by bridges u/s and d/s. # Predominantly impervious catchment. Land use; mainly arable.		1996	459	77	98	83	0.63	*36.8*	*09/01*	>0.00	22/07	1.2	0.07	0.01
		1997	521	88	28	24	0.18	2.8	29/12	0.01	03/06	0.4	0.07	0.02
		1998	704	119	183	155	1.17	35.0	10/04	0.02	13/08	3.1	0.22	0.03
		1999	617	104	129	109	0.83	15.7d	16/01	0.02	27/07	2.1	0.15	0.03
		2000	757	127	274	232	1.75	**42.4d**	**06/11**	0.03	13/08	3.8	0.48	0.05

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
033040	**Rhee at Ashwell** C.A: 2.0 km^2	**65..95**	**591**		**1020**		**0.06**	**0.4**	**30/05 1979**	**0.02**	**30/07 1973**	**0.1**	**0.05**	**0.03**
M.A: EA	Local No: Sens.: 14.1 S/full: 1.1m^3s^{-1}													
F.A.R: RG	Level: 40m UE: FAI:													
Comment: Trapezoidal standing wave flume in moulded glass reinforced plastic. Situated 0.5km d/s of source of R. Rhee. Flows influenced by large gw abstractions for PWS. Min. spring flow of 0.03 m^3s^{-1} maintained by artificial gw recharge for conservation purposes. Gw contributing area exceeds topographic CA. Runoff data unrealistic. # Geology: predominantly Chalk. Land use: agricultural.		1996	381	64	480	47	0.03	0.1	11/02	**0.01**	**09/10**	0.0	0.03	0.02
		1997	493	83	341	33	0.02	0.0d	16/06	**0.01**	**04/03**	0.0	0.02	0.01
		1998	681	115	498	49	0.03	0.1	11/06	0.02	10/02	0.0	0.03	0.02
		1999	581	98	805	79	0.05	0.1d	07/03	0.03	18/10	0.1	0.04	0.03
		2000	804	136	798	78	0.05	0.1d	24/12	0.03	22/01	0.1	0.04	0.03
033027	**Rhee at Wimpole** C.A: 119.1 km^2	**65..95**	**577**		**138**		**0.52**	**9.2**	**13/10 1993**	**0.00**	**22/08 1976**	**1.2**	**0.28**	**0.07**
M.A: EA	Local No: Sens.: 30.0 S/full: 6.0m^3s^{-1}													
F.A.R: GEI	Level: 18m UE: <.01 FAI: 1.000													
Comment: Trapezoidal critical depth flume, 6.6m broad; horizontal crest 3.8m. Drowns at peak levels; correction incorporated into theoretical rating. Spills occasionally - high flows impeded by bridge abutments 20m d/s. Some surface water and groundwater abstractions in catchment. # Predominantly Chalk catchment with approx. 20% Boulder Clay cover. Land use: agricultural.		1996	383	66	49	36	0.19	3.3	09/01	0.04	05/10	0.4	0.10	0.06
		1997	472	82	18	13	0.07	0.6	28/06	0.03	17/08	0.1	0.06	0.04
		1998	688	119	96	70	0.36	4.3	27/09	0.05	02/09	0.9	0.14	0.07
		1999	595	103	110	80	0.42	4.1	07/03	0.07	31/08	1.0	0.23	0.08
		2000	805	140	220	159	0.83	7.1	30/10	0.12	26/08	2.1	0.38	0.14
033064	**Whaddon Brook at Whaddon** C.A: 16.0 km^2	**80..95**	**583**		**170**		**0.09**	**0.4**	**14/10 1993**	**0.03**	**04/12 1989**	**0.1**	**0.08**	**0.04**
M.A: EA	Local No: Sens.: 12.5 S/full: 0.5m^3s^{-1}													
F.A.R: GE	Level: 16m UE: FAI:													
Comment: Pre-cast fibreglass flume set in concrete; long-crested flume crest 0.1m broad. Flows affected by effluent from Royston STW u/s of station. # The stream is largely gw fed. Geology: Chalk. Land use: rural.		1996	386	66										
		1997	472	81	109	64	0.06	0.3	26/06	0.03	16/08	0.1	0.05	0.03
		1998	674	116	155	91	0.08	**0.5**	**09/04**	0.03	30/08	0.2	0.07	0.03
		1999	592	102	153	90	0.08	0.2d	28/01	0.04	07/09	0.1	0.06	0.04
		2000	801	137	236	139	0.12	0.4d	07/11	0.05	28/08	0.2	0.09	0.06
033062	**Guilden Brook at Fowlmere Two** C.A: 3.4 km^2	**64..95**	**567**		**584**		**0.06**	**0.4**	**05/02 1984**	**0.02**	**21/08 1989**	**0.1**	**0.05**	**0.02**
M.A: EA	Local No: Sens.: S/full: 1.5m^3s^{-1}													
F.A.R: G	Level: 19m UE: FAI:													
Comment: Trapezoidal flume in trapezoidal, straight channel. Opened as part of gw scheme. Abstraction u/s for spray irrigation. # Small, mainly gw fed, catchment draining the Chalk, SSE of Cambridge. Rural - grassland, orchard and deciduous woodland.		1996	378	67	299	51	0.03	0.1	17/04	**0.02**	**29/10**	0.0	0.03	0.02
		1997	456	80	152	26	0.02	0.0d	18/03	**>0.00**	**21/08**	0.0	0.02	
		1998	637	112	283	48	0.03	0.1	16/05	0.02	22/08	0.0	0.03	0.02
		1999	561	99	374	64	0.04	0.1d	21/03	0.02	27/07	0.1	0.03	0.03
		2000	767	135										
033061	**Shep at Fowlmere One** C.A: 3.4 km^2	95..95	534					0.3	14/03 1995	0.03	09/08 1995			
M.A: EA	Local No: Sens.: S/full: 0.5m^3s^{-1}													
F.A.R: G	Level: 20m UE: FAI:													
Comment: Crump weir 1.1m wide installed in Mar 1983. Replaced a rectangular thin-plate weir operational from 1978. Levels from 1964. Station opened as part of gw scheme. Weed growth d/s may affect flow. Bridge invert immediately d/s would cause drowning above 0.4m^3s^{-1}. # Small, mainly gw fed, catchment draining from the Chalk, SSE of Cambridge. Rural - grassland, marsh and woodland.		1996	376	70	504		0.05	0.2	21/02	0.01	15/09	0.1	0.04	0.02
		1997	454	85	190		0.02	0.0d	22/01	>0.00	12/06	0.0	0.02	0.01
		1998	633	119	387		0.04	0.1d	23/12	0.01	22/08	0.1	0.04	0.02
		1999	559	105										
		2000	764	143	903		0.10	0.4d	23/11	0.04	12/09	0.2	0.08	0.05
033021	**Rhee at Burnt Mill** C.A: 303.0 km^2	**62..95**	**570**		**126**		**1.21**	**19.4**	**29/03 1979**	**0.05**	**21/08 1976**	**2.5**	**0.79**	**0.27**
M.A: EA	Local No: Sens.: 19.4 S/full: 14.0m^3s^{-1}													
F.A.R: GEI	Level: 9m UE: .01 FAI: 0.997													
Comment: Trapezoidal cross-section weir with triangular profile crest, 6.1m broad. Weir drowns out at high flows; rating modified by c/m measurements to correct for drowning. Weir also subject to drowning during summer due to weed growth d/s. Substantial gw abstractions for PWS. Augmentation from gw sources to regulate river flow. # Predominantly Chalk catchment - approx 30% overlain with Boulder Clay. Land use arable.		1996	387	68	59	47	0.56	3.7	08/01	0.17	18/09	1.1	0.35	0.24
		1997	471	83	29	23	0.28	1.1	28/06	0.15	19/08	0.4	0.26	0.17
		1998	672	118	89	71	0.86	7.0	16/04	0.15	20/08	1.8	0.53	0.25
		1999	593	104	99	79	0.95	6.7	08/03	0.28	09/09	2.0	0.61	0.31
		2000	792	139	196	156	1.87	11.2	08/11	0.36	15/08	4.6	1.03	0.46
033051	**Cam at Chesterford** C.A: 141.0 km^2	**64..95**	**607**		**134**		**0.60**	**13.0**	**01/02 1979**	**0.07**	**26/07 1976**	**1.1**	**0.43**	**0.18**
M.A: EA	Local No: Sens.: 13.9 B/full: 46.0m^3s^{-1}													
F.A.R: GEI	Level: 35m UE: .02 FAI: 0.993													
Comment: Compound broad-crested weir, 22.3m broad (in trapezoidal section) with central notch 3m broad, 0.23m deep. Significant gw abstractions for PWS. # Geology: predominantly Chalk - approx. 70% Boulder Clay cover. Land use: arable.		1996	443	73	65	49	0.29	5.5	12/02	0.12	06/10	0.4	0.23	0.14
		1997	495	82	40	30	0.18	0.8	25/02	0.11	22/08	0.2	0.17	0.13
		1998	702	116	107	80	0.48	9.1	15/04	0.14	22/08	1.0	0.27	0.17
		1999	642	106	133	99	0.60	7.1d	28/01	0.20	02/08	1.1	0.36	0.22
		2000	832	137	216	161	0.96	9.2d	30/10	0.22	12/09	2.1	0.56	0.25
033024	**Cam at Dernford** C.A: 198.0 km^2	**49..95**	*596*		**153**		**0.96**	**14.1**	**02/02 1979**	**0.03**	**03/07 1949**	**1.7**	**0.75**	**0.32**
M.A: EA	Local No: Sens.: 14.6													
F.A.R: GEI	Level: 15m UE: .02 FAI: 0.995													
Comment: Rectangular thin-plate weir, 5.8m broad. Bridge pier may affect approach velocity at high flows. Weir subject to drowning, tailwater levels measured to assist rating. Five groundwater abstractions for PWS. Flow regime affected by industrial effluent derived from groundwater pumped within the catchment. # Predominantly pervious catchment underlain by Chalk(60%). Land use: arable.		1996	430	72	74	48	0.46	5.1	12/02	0.16	06/10	0.8	0.36	0.18
		1997	488	82	42	27	0.26	0.8	25/02	0.10	24/08	0.4	0.27	0.14
		1998	685	115	96	63	0.60	6.9	16/04	0.19	31/08	1.0	0.43	0.26
		1999	626	105	129	84	0.81	8.1	28/01	0.29	03/08	1.4	0.54	0.34
		2000	819	137	204	133	1.27	9.2	31/10	0.31	26/08	2.7	0.85	0.39
033066	**Granta at Linton** C.A: 59.8 km^2	**81..95**	**616**		**101**		**0.19**	**5.5**	**09/10 1987**	**0.00**	**01/09 1992**	**0.4**	**0.09**	**>0.00**
M.A: EA	Local No: Sens.: 25.0 S/full: 3.9m^3s^{-1}													
F.A.R: GEI	Level: 40m UE: FAI:													
Comment: Compound Crump Weir, 5.3m broad with 1.5m central crest. Structure drowns when u/s water level exceeds about 0.46m. Some gw abstraction. River is pump supported to maintain flow at approx. 0.03 m^3s^{-1}; zero flows occur when pumps fail. # A small rural catchment developed largely on Chalk - land use is principally agricultural (arable).		1996	424	69	38	38	0.07	3.5	09/01	>0.00	26/09	0.1	0.03	0.01
		1997	495	80	14	14	0.03	0.4	19/12	0.00	07/06	0.0	0.03	0.02
		1998	672	109	58	57	0.11	3.9	02/11	>0.00	11/01	0.3	0.03	0.01
		1999	642	104	83	82	0.16	3.3d	07/03	0.02	01/08	0.4	0.05	0.02
		2000	814	132	179	177	0.34	4.2d	06/11	0.02	12/09	0.8	0.12	0.03
033055	**Granta at Babraham** C.A: 98.7 km^2	**63..95**	**601**		**77**		**0.24**	**8.9**	**29/01 1988**	**0.00**	**06/11 1976**	**0.5**	**0.14**	**0.01**
M.A: EA	Local No: Sens.: 36.0 S/full: 6.5m^3s^{-1}													
F.A.R: GEI	Level: 23m UE: .01 FAI: 1.000													
Comment: Triangular profile Flat V weir, 8.3m broad; constructed on an old brick weir. Height of wing walls above crest - 0.6m. Significant gw abstractions for PWS. # Geology: Chalk catchment. Land use: predominantly arable.		1996	413	69										
		1997	487	81	5	6	0.02	0.3	25/02	>0.00	09/08	0.0	>0.00	>0.00
		1998	665	111	35	45	0.11	2.8	25/12	0.01	11/01	0.3	0.04	0.01
		1999	628	104	63	82	0.20	3.0d	07/03	0.02	04/12	0.4	0.10	0.04
		2000	799	133	131	170	0.41	5.3d	06/11	0.04	12/09	1.0	0.19	0.05
033053	**Granta at Stapleford** C.A: 114.0 km^2	**49..95**	*586*		**63**		**0.23**	**9.6d**	**21/12 1960**	**0.00**	**01/10 1976**	**0.5**	**0.13**	**0.01**
M.A: EA	Local No: 33053 Sens.: 70.0 S/full: 7.5m^3s^{-1}													
F.A.R: GEI	Level: 15m UE: FAI:													
Comment: Compound weir with Crump notch (1.5m broad) and broad-crested flanks (3m broad) superseded - in 1981 - original thin-plate weir; some flows estimated, only monthly means are considered valid. # Headwaters drain the Chalk, mainly impervious below. Land use: dominated by arable agriculture.		1996	410	70	28	44	0.10	2.8	12/02	0.00	18/08	0.2	>0.00	>0.00
		1997	481	82	2	3	0.01			0.00	28/05	0.0	0.01	
		1998	660	113	32	51	0.11	3.2	16/04	0.01	22/08	0.3	0.04	0.01
		1999	621	106	63	100	0.23	2.8d	07/03	0.02	02/08	0.5	0.12	0.04
		2000	791	135	131	208	0.47	4.6d	07/11	0.04	12/09	1.1	0.22	0.05

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
033056	**Quy Water at Lode** C.A: 76.4 km^2	**65..95**	**569**		**79**		**0.19**	**2.7**	**07/08 1988**	**0.00**	**20/09 1976**	**0.5**	**0.14**	**0.01**
M.A: EA	Local No: Sens.: 50.0 S/full: 2.4m^3s^{-1}													
F.A.R: GEI	Level: 3m UE: FAI:													
Comment: Compound weir, 4.8m broad, with Crump profile centre section, 1m broad, 0.3m deep. At flows greater than 0.32 m^3s^{-1} flow occurs over broad-crested flanks between vertical side walls. Pre-1975 data imprecise. Peak flow data from 1979. In dry weather stream leaks through bed into the fen and can dry up. Three large abstractions in catchment for PWS. # Geology: Chalk with Upper Greensand in lower catchment. Land use: mainly agricultural with eastern edge of Cambridge encroaching into catchment.		1996	384	67											
		1997	491	86	21	27	0.05	0.7	20/04	0.02	25/08	0.1	0.05	0.03
		1998	638	112	49	62	0.12	0.9	26/12	0.03	20/09	0.2	0.10	0.03
		1999	625	110	98	124	0.24	0.8d	08/03	0.03	02/08	0.5	0.15	0.03
		2000	713	125	139	176	0.33	1.2d	28/11	0.04	27/08	0.9	0.26	0.06
033052	**Swaffham Lode at Swaffham Bulbeck** C.A: 36.4 km^2	**63..95**	**561**		**137**		**0.16**	**1.4**	**13/10 1993**	**0.02**	**07/09 1976**	**0.3**	**0.14**	**0.06**
M.A: EA	Local No: Sens.: S/full: 2.6m^3s^{-1}													
F.A.R: GE	Level: 3m UE: <.01 FAI: 1.000													
Comment: Crump profile weir, 2.5m broad, situated immediately u/s of road bridge. Prior to 1973 thin-plate weir, 1.45m broad. Significant gw abstractions for PWS. # Geology: predominantly Chalk. Land use: arable.		1996	405	72										
		1997	496	88	29	21	0.03	0.2	13/08	0.02	02/10	0.0	0.04	0.02
		1998	666	119	88	64	0.10	0.3	31/12	0.04	01/01	0.2	0.08	0.06
		1999	649	116										
		2000	756	135	194	142	0.22	0.5d	28/11	0.12	12/09	0.4	0.21	0.13
033067	**New River at Burwell** C.A: 19.6 km^2	**82..95**	**587**		**373**		**0.23**	**1.0**	**30/01 1988**	**0.09**	**07/11 1989**	**0.4**	**0.21**	**0.10**
M.A: EA	Local No: Sens.: 15.5 S/full: 1.7m^3s^{-1}													
F.A.R: GEI	Level: 3m UE: FAI:													
Comment: Crump weir 1.5m broad in straight, high banked ditch. Structure drowns at relatively low level (0.32m). Flows affected by groundwater abstractions and weed growth (farmer will not allow EA weed cutting machinery onto land with crops. Runoff suggests that contributing area exceeds topographic catchment. # Entirely drift free Chalk catchment. Rural with arable farming the dominant land use.		1996	389	66	198	53	0.12	0.3	02/10	0.08	31/07	0.2	0.11	0.08
		1997	511	87	170	46	0.11	0.2d	28/06	0.08	05/06	0.1	0.10	0.08
		1998	645	110	278	75	0.17	0.8	08/10	0.11	15/10	0.2	0.16	0.13
		1999	660	112	1146	307	0.71	1.8d	11/08	0.14	17/10	1.4	0.58	0.15
		2000	721	123	479	128	0.30	0.7d	28/05	0.14	06/10	0.5	0.26	0.15
033050	**Snail at Fordham** C.A: 60.6 km^2	**60..95**	**583**		**157**		**0.30**	**2.3**	**13/10 1993**	**0.05**	**06/08 1992**	**0.5**	**0.28**	**0.11**
M.A: EA	Local No: Sens.: 21.4 S/full: 7.8m^3s^{-1}													
F.A.R: GI	Level: 10m UE: .04 FAI: 1.000													
Comment: Flat V Crump profile weir, 4m broad. Prior to 1985 subsidiary Crump profile weir (0.7m broad) measured bypass channel discharge. Flows combined into single series. Weir removed 12/84 and main weir rating adjusted to compensate (flows increased by 2%). Significant gw abstractions for PWS and surface water abstractions for spray irrigation. # Geology: predominantly Chalk; S part of catchment covered by Boulder Clay. Land use: 90% rural; 10% urbanised (Newmarket).		1996	425	73	92	59	0.18	0.9	09/01	0.09	21/08	0.3	0.15	0.09
		1997	528	91	69	44	0.13	0.9	11/06	0.08	03/06	0.2	0.12	0.08
		1998	682	117	124	79	0.24	2.4	09/04	0.10	20/08	0.3	0.21	0.12
		1999	695	119	165	105	0.32	1.2d	07/03	0.16	02/08	0.4	0.31	0.18
		2000	784	134	208	132	0.40	2.0d	06/11	0.17	13/09	0.6	0.35	0.20
033014	**Lark at Temple** C.A: 272.0 km^2	**60..95**	**610**		**148**		**1.28**	**22.1**	**17/09 1968**	**0.16**	**26/07 1991**	**2.3**	**1.04**	**0.52**
M.A: EA	Local No: Sens.: 6.8 S/full: 25.0m^3s^{-1}													
F.A.R: GEI	Level: 9m UE: .02 FAI: 0.955													
Comment: Compound broad-crested weir with rectangular cross-section, 5.8m broad, central notch 3m broad. Full range rating confirmed by c/m measurements. Flows affected by milling u/s of gauging station. Significant gw abstractions in catchment for PWS, industry and agriculture. # Geology: predominantly Chalk - 70% overlain with Boulder Clay. Land use - agricultural.		1996	477	78	74	50	0.64					0.9	0.64	0.34
		1997	531	87	60	41	0.52	3.7	19/12	0.13	18/08	0.8	0.49	0.23
		1998	686	112	121	82	1.04	9.0	10/04	0.36	22/08	1.7	0.85	0.48
		1999	729	120	155	105	1.33	7.3	24/04	0.50	02/08	2.0	1.15	0.70
		2000	795	130	209	141	1.80	11.4	08/11	0.62	05/09	3.5	1.34	0.79
033023	**Lea Brook at Beck Bridge** C.A: 101.8 km^2	**62..95**	**562**		**77**		**0.25**	**5.4**	**13/10 1993**	**>0.00**	**02/10 1991**	**0.6**	**0.13**	**0.02**
M.A: EA	Local No: Sens.: 90.1 S/full: 4.2m^3s^{-1}													
F.A.R: GEI	Level: 4m UE: <.01 FAI: 1.000													
Comment: Crump profile weir 4m wide, situated approx. 20m u/s of new road bridge. All but the very highest flows are contained. The low flow calibration has been confirmed by c/m. There is some doubt about the high flow calibration owing to two large concrete blocks which spoil the entry condition. Some gw abstraction for PWS. # A rural Chalk catchment with approx. 70% Boulder Clay cover.		1996	439	78	15	19	0.05	1.2	25/02	0.01	23/10	0.1	0.03	0.02
		1997	539	96	8	10	0.03	0.4	19/12	0.01	17/11	0.0	0.02	0.02
		1998	685	122	39	51	0.13	5.7	10/04	0.03	01/01	0.2	0.06	0.03
		1999	715	127	75	97	0.24	3.2	24/04	0.05	05/12	0.4	0.18	0.06
		2000	798	142	135	175	0.44	3.8	30/10	0.04	12/09	1.0	0.26	0.08
033046	**Thet at Red Bridge** C.A: 145.3 km^2	**67..95**	**633**		**190**		**0.88**	**18.0d**	**17/09 1968**	**0.03**	**25/08 1976**	**1.9**	**0.52**	**0.14**
M.A: EA	Local No: Sens.: 23.8 B/full: 14.6m^3s^{-1}													
F.A.R: GI	Level: 20m UE: .02 FAI: 0.956													
Comment: Crump profile weir 4m broad. Theoretical rating confirmed by current metering to structurefull, thereafter rating allows for drowning and spilling. Gw abstractions for PWS and industry; surface water abstractions for spray irrigation. Highest instantaneous flows available from 1973. # Geology: predominantly Chalk overlain with Boulder Clay. Land use: agricultural.		1996	512	81	87	46	0.40	2.3	20/12	0.05	07/08	0.8	0.28	0.09
		1997	581	92	108	57	0.50	6.4	20/12	0.09	23/09	1.0	0.31	0.12
		1998	789	125	301	158	1.39	13.6	10/04	0.15	21/08	3.8	0.79	0.22
		1999	732	116	252	133	1.16	11.6d	10/03	0.12	02/08	2.6	0.68	0.19
		2000	748	118	312	164	1.43	12.3d	07/11	0.18	26/08	3.7	0.79	0.20
033045	**Wittle at Quidenham** C.A: 28.3 km^2	**67..95**	**617**		**146**		**0.13**	**3.2d**	**16/09 1968**	**0.00**	**06/10 1992**	**0.3**	**0.07**	**0.01**
M.A: EA	Local No: Sens.: 32.4 S/full: 2.2m^3s^{-1}													
F.A.R: GI	Level: 24m UE: .01 FAI: 0.976													
Comment: Compound broad-crested weir (crest 3m), with central notch separated by splitter plates; situated under road bridge. Theoretical rating modified by c/m measurements. Flow regime altered by pumping of two boreholes into river u/s of Quidenham to support Ely Ouse to Essex Transfer Scheme (abstraction point at Hockwold on the Little Ouse). Weir drowned in 1968 floods. HIFs available from 1973. # Geology: predominantly Chalk overlain with Boulder Clay. Land use: agricultural.		1996	494	80	54	37	0.05	0.2	30/12	0.01	25/06	0.1	0.04	0.02
		1997	574	93	57	39	0.05	1.4	01/07	0.01	16/09	0.1	0.04	0.01
		1998	777	126	199	136	0.18	1.0	12/04	0.04	20/08	0.4	0.12	0.04
		1999	757	123	241	165	0.22	1.4d	10/03	0.03	02/08	0.5	0.15	0.05
		2000	715	116	228	156	0.20	1.3d	07/11	0.03	13/09	0.5	0.12	0.03
033044	**Thet at Bridgham** C.A: 277.8 km^2	**67..95**	**632**		**179**		**1.58**	**13.8**	**04/02 1979**	**0.12**	**26/08 1976**	**3.3**	**1.09**	**0.39**
M.A: EA	Local No: Sens.: 14.9 S/full: 10.0m^3s^{-1}													
F.A.R: GEI	Level: 15m UE: .01 FAI: 0.952													
Comment: Crump profile weir, 6m broad. Prior to Oct 1979, broad-crested weir (crest: 7.4m), situated under double-arch bridge. Theoretical rating for original weir confirmed by c/m measurements. Gw abstractions in catchment. # Geology: Chalk with approx. 90% Boulder Clay cover. Rural catchment with one or two small towns.		1996	512	81	88	49	0.77					1.3	0.67	0.37
		1997	578	91	100	56	0.88	4.5d	20/12	0.21	20/09	1.5	0.74	0.27
		1998	787	125	244	136	2.15	13.1	11/04	0.46	19/08	4.5	1.72	0.57
		1999	750	119	246	137	2.17	11.5d	12/03	0.37	02/08	4.1	1.68	0.61
		2000	753	119	249	139	2.19	9.5d	09/11	0.50	17/08	4.4	1.79	0.55
033019	**Thet at Melford Bridge** C.A: 316.0 km^2	**62..95**	**618**		**184**		**1.84**	**15.2**	**29/04 1981**	**0.10**	**25/08 1976**	**3.7**	**1.34**	**0.49**
M.A: EA	Local No: Sens.: 14.2 S/full: 14.5m^3s^{-1}													
F.A.R: GEI	Level: 11m UE: .01 FAI: 0.957													
Comment: Triangular profile weir, 6.2m broad. Theoretical rating modified in Apr 1968. Weir subject to drowning during summer due to weed growth d/s. # Predominantly Chalk catchment; approx 70% overlain by Boulder Clay. Land use: arable.		1996	515	83	98	53	0.98	3.1	25/02	0.26	20/06	1.6	0.84	0.46
		1997	576	93	104	57	1.05	5.4	21/12	0.29	22/09	1.7	0.91	0.33
		1998	786	127	248	135	2.49	14.1	13/04	0.51	22/08	5.2	2.08	0.73
		1999	756	122	251	136	2.52	12.9	12/03	0.46	02/08	4.7	2.03	0.71
		2000	753	122	252	137	2.52	9.9	10/11	0.58	18/08	5.2	2.11	0.66
033063	**Little Ouse at Knettishall** C.A: 101.0 km^2	**80..95**	**609**		**141**		**0.45**	**6.8**	**27/08 1987**	**0.05**	**31/08 1990**	**0.9**	**0.31**	**0.13**
M.A: EA	Local No: Sens.: 19.0 S/full: 7.9m^3s^{-1}													
F.A.R: GEI	Level: 16m UE: .01 FAI: 0.982													
Comment: Compound Crump profile weir, 4.5m broad. Structure drowns above 3.35 m^3s^{-1}. Minor abstractions and returns. 3 wells constructed in 1987 to augment low flows. # Geology: predominantly Chalk. Land use: arable.		1996	481	79	59	42	0.19	0.8	20/11	0.05	26/08	0.3	0.18	0.09
		1997	544	89	53	38	0.17	2.2	19/12	0.05	21/08	0.2	0.16	0.06
		1998	716	118	148	105	0.48	4.9	11/04	0.13	20/08	1.0	0.35	0.15
		1999	740	122	204	145	0.65	4.4d	25/04	0.19	02/08	1.2	0.50	0.23
		2000	710	117	223	158	0.71	5.1d	08/11	0.16	13/09	1.3	0.43	0.18

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
033011	**Little Ouse at County Bridge Euston** C.A: 128.7 km^2	**48..95**	*588*		**102**		**0.42**	**11.1d**	**10/03 1952**	**0.00**	**19/08 1976**	**0.8**	**0.29**	**0.09**
M.A: EA	Local No: Sens.: 12.2 S/full: 30.0m^3s^{-1}													
F.A.R: GEI	Level: 13m UE: <.01 FAI: 0.985													
Comment: Compound weir with triangular profile centre section, 3.4m broad; broad-crested flanks in trapezoidal channel - 9m. Gw abstractions for PWS and spray irrigation. HIFs from Nov 1960. # Geology: predominantly Chalk with some clay. Land use: agricultural.		1996	485	82	30	29	0.12	0.6	20/11	>0.00	03/08	0.2	0.12	0.03
		1997	544	93	30	29	0.12	*3.0*	*20/12*	0.00	03/10	0.2	0.10	0.01
		1998	720	122	108	106	0.44	5.6	11/04	0.09	22/08	0.9	0.32	0.11
		1999	745	127	157	154	0.64	4.4d	11/03	0.12	02/08	1.1	0.50	0.20
		2000	713	121	159	156	0.65	5.8d	31/05	0.13	30/08	1.3	0.45	0.15
033013	**Sapiston at Rectory Bridge** C.A: 205.9 km^2	**49..95**	*599*		**102**		**0.67**	**15.6**	**17/09 1968**	**>0.00**	**05/10 1991**	**1.4**	**0.44**	**0.09**
M.A: EA	Local No: Sens.: 40.4 S/full: 14.0m^3s^{-1}													
F.A.R: GEI	Level: 16m UE: .01 FAI: 0.980													
Comment: Rectangular thin-plate weir, 8.8m broad, suppressed end contractions. Minor gw abstractions for PWS and agriculture. HIFs on NRFA from May 1960. # Geology: predominately Chalk with Boulder Clay cover. Land use: agricultural.		1996	468	78	51	50	0.33	1.9	21/11	0.05	18/07	0.6	0.30	0.07
		1997	523	87	49	48	0.32	3.7	21/12	0.04	10/09	0.6	0.23	0.07
		1998	669	112	114	112	0.74	6.0	11/04	0.16	21/08	1.6	0.49	0.18
		1999	702	117	136	133	0.88	4.4	03/03	0.14	24/07	1.8	0.66	0.26
		2000	744	124	182	178	1.19	10.0	08/11	0.19	01/09	2.8	0.72	0.27
033034	**Little Ouse at Abbey Heath** C.A: 688.5 km^2	**68..95**	**608**		**173**		**3.78**	**25.3**	**13/10 1987**	**0.48**	**28/08 1976**	**7.2**	**2.81**	**1.15**
M.A: EA	Local No: Sens.: 10.6 S/full: 40.0m^3s^{-1}													
F.A.R: GEI	Level: 7m UE: .01 FAI: 0.973													
Comment: Rectangular section Crump profile weir with crest tapping. Replaced 33008 (Thetford Staunch) in 1968. Weir subject to drowning and spills on rare occasions. Since the late 1980s, low flows augmented with groundwater in drought conditions. Vandalised August 2000, estimated rebuild early 2002. # Geology: Chalk with approx. 85% Boulder Clay cover. Land use: predominately agricultural with large areas of forest and heathland.		1996	496	82	77	45	1.68	5.8	21/11	0.63	20/06	2.7	1.53	0.85
		1997	553	91	80	46	1.75	8.8	21/12	0.51	27/09	2.7	1.58	0.67
		1998	736	121	189	109	4.13	21.1	12/04	1.22	22/08	8.3	3.45	1.38
		1999	738	121	210	121	4.59	18.2	12/03	1.18	02/08	8.3	3.74	1.61
		2000	742	122										
033006	**Wissey at Northwold** C.A: 274.5 km^2	**56..95**	**650**		**205**		**1.79**	**13.3**	**20/11 1974**	**0.18**	**19/09 1991**	**3.5**	**1.40**	**0.46**
M.A: EA	Local No: 33106 Sens.: 9.2 S/full: 11.5m^3s^{-1}													
F.A.R: PGEI	Level: 5m UE: .01 FAI: 0.955													
Comment: Rectangular critical depth flume, 4.9m wide, main weir (33106) with side weir (from March 1981 - 33206) taking approx. 10% runoff, streams rejoin just d/s of gauges. Combined flows from 1997. Drowning common - flows adjusted. Limited net impact of abstractions and discharges but spray irrigation increasing (substantial proportion from groundwater). # Geology: Chalk overlain by Boulder Clay (permeable in parts). Low population density. Largely arable, extensive heathland also.		1996	543	84	108	53	0.94	3.4d	26/02	0.25	21/08	1.6	0.86	0.30
		1997	621	96	119	58	1.04	4.3d	21/12	0.38	27/09	1.7	0.92	0.43
		1998	795	122	240	117	2.09	9.8d	12/04	0.59	26/09	4.1	1.86	0.63
		1999	758	117	237	116	2.06	6.9d	11/03	0.56	10/09	3.8	1.63	0.65
		2000	821	126	263	128	2.28	6.6d	09/11	0.74	31/08	4.1	2.06	0.82
033029	**Stringside at Whitebridge** C.A: 98.8 km^2	**65..95**	*629*		**158**		**0.49**	**4.6**	**29/01 1988**	**0.00**	**27/08 1995**	**1.1**	**0.36**	**0.04**
M.A: EA	Local No: Sens.: 21.1 S/full: 3.9m^3s^{-1}													
F.A.R: GI	Level: 3m UE: <.01 FAI: 0.993													
Comment: A trapezoidal critical depth flume, calibrated by model and designed to operate in the non-modular range. High flows should be reliable in periods when the channel has been maintained. Two gw abstractions for PWS. # A rural catchment developed mainly on Chalk with some clay.		1996	542	86	43	27	0.14	0.6	19/12	0.02	21/07	0.3	0.13	0.03
		1997	602	96	64	41	0.20	1.4	19/12	0.05	30/09	0.3	0.20	0.06
		1998	784	125	198	125	0.62	**5.4**	**09/04**	0.13	26/09	1.2	0.54	0.13
		1999	709	113	170	108	0.53	3.2	10/03	0.05	04/08	1.1	0.39	0.08
		2000	795	126	204	129	0.64	3.2	26/04	0.11	30/08	1.3	0.60	0.13
033007	**Nar at Marham** C.A: 153.3 km^2	**53..95**	*680*		**238**		**1.16**	**7.8**	**12/02 1977**	**0.14**	**24/08 1976**	**2.1**	**0.97**	**0.42**
M.A: EA	Local No: Sens.: 12.0 S/full: 25.6m^3s^{-1}													
F.A.R: PGEI	Level: 5m UE: <.01 FAI: 0.932													
Comment: Critical depth flume, 7.16m wide. Prior to Apr 1982, flume (7.47m wide) contained low flow notch. Weed growth can be a problem during summer if not cut regularly. Surface water abstraction for PWS immediately u/s of station. Three small underground abstractions were abandoned in 1986. # Geology: Chalk catchment overlain by clay in upper reaches. Land use - agricultural.		1996	586	86	118	50	0.57	1.5	21/12	0.17	06/08	0.9	0.58	0.23
		1997	648	95	151	63	0.73	1.7	21/12	0.40	25/09	1.0	0.74	0.43
		1998	852	125	277	116	1.35	6.6	11/04	0.63	22/08	2.0	1.30	0.69
		1999	757	111	251	105	1.22	3.6	10/03	0.48	01/08	2.0	1.05	0.56
		2000	857	126	267	112	1.29	4.2	31/10	0.52	12/09	2.2	1.20	0.61
033054	**Babingley at Castle Rising** C.A: 47.7 km^2	**76..95**	**670**		**315**		**0.48**	**2.1**	**28/03 1979**	**0.06**	**08/01 1995**	**0.8**	**0.42**	**0.15**
M.A: EA	Local No: Sens.: S/full: 11.0m^3s^{-1}													
F.A.R: GEI	Level: 5m UE: <.01 FAI: 0.954													
Comment: Triangular profile Flat V Crump weir, 4.5m broad; level of wingwalls - 1.2m above crest. Subject to drowning. Significant gw abstraction for PWS. Access problems may force closure. # Geology: Chalk catchment. Land use: arable.		1996	590	88	157	50	0.24	1.2	27/05	0.08	09/08	0.4	0.22	0.13
		1997	613	91	220	70	0.33	1.1	05/05	0.23	20/08	0.4	0.33	0.24
		1998	823	123	405	129	0.61	1.4	11/04	0.34	13/08	0.9	0.60	0.37
		1999	785	117	442	140	0.67	1.4	26/01	0.30	02/08	1.0	0.58	0.33
		2000	828	124	441	140	0.66	1.3	25/11	0.36	06/10	1.0	0.65	0.39
033032	**Heacham at Heacham** C.A: 59.0 km^2	**65..95**	**679**		**110**		**0.20**	**1.2**	**01/08 1980**	**0.01**	**10/12 1991**	**0.4**	**0.17**	**0.04**
M.A: EA	Local No: Sens.: 33.5 S/full: 5.0m^3s^{-1}													
F.A.R: GI	Level: 9m UE: .02 FAI: 1.000													
Comment: Two Crump profile weirs in parallel, each 3m broad. Weirs never drown. Gw abstraction for PWS and irrigation. Topographical catchment area substantially exceeds the true contributing area (by a factor of about two). # Geology: predominantly Chalk (approx. 40%); overlain by Boulder Clay. Land use: agricultural.		1996	577	85	50	45	0.09	0.5	22/04	0.05	23/10	0.1	0.09	0.05
		1997	629	93	56	51	0.11	0.2	22/04	0.07	14/11	0.1	0.10	0.07
		1998	844	124	119	108	0.22	0.6	01/05	0.07	19/10	0.4	0.21	0.08
		1999	803	118	163	148	0.31	0.8	26/01	0.13	09/09	0.6	0.22	0.14
		2000	816	120	166	151	0.31	0.7	05/12	0.14	05/10	0.5	0.30	0.15
034012	**Burn at Burnham Overy** C.A: 80.0 km^2	**66..95**	**668**		**121**		**0.31**	**1.4**	**20/02 1977**	**0.05**	**19/09 1989**	**0.5**	**0.26**	**0.09**
M.A: EA	Local No: Sens.: 7.6 B/full: 2.8m^3s^{-1}													
F.A.R: GEI	Level: 3m UE: .01 FAI: 1.000													
Comment: A Crump weir which bypasses at 2.3 m^3s^{-1}. Can be affected by mill operations c 50m upstream. Annual hydrographs reflect high baseflow component from the Chalk aquifer. Gw abstractions have only a minimal impact on the natural runoff. May be a minor net import from outside the catchment due to effluent. # Predominantly Boulder Clay with underlying Chalk exposed in the valleys. Rural land use.		1996	553	83	58	48	0.15	0.6	01/03	0.09	20/08	0.2	0.15	0.09
		1997	627	94	63	52	0.16	*1.4*	*30/04*	0.06	05/11	0.2	0.16	0.12
		1998	830	124	131	108	0.33	*1.5*	*14/06*	0.18	01/01	0.5	0.34	0.21
		1999	805	121	184	152	0.47	1.4	19/04	0.20	07/08	0.8	0.38	0.24
		2000	825	124	164	136	0.41	1.4	17/12	0.24	06/10	0.6	0.40	0.26
034018	**Stiffkey at Warham All Saints** C.A: 87.8 km^2	**72..95**	**657**		**185**		**0.51**	**12.5**	**11/02 1977**	**0.04**	**28/07 1976**	**1.0**	**0.38**	**0.09**
M.A: EA	Local No: Sens.: 16.5													
F.A.R: PGI	Level: 5m UE: .01 FAI: 0.997													
Comment: Flat V weir with crest tapping, drowns above 0.8 m^3s^{-1}. Prior to 1978 (when dredging took place) d/s weed growth during summer months could cause complete drowning of gauging structure at lower flows. Large abstractions from gw for PWS causes a significant reduction in the natural runoff. # The catchment is predominantly Chalk and Boulder Clay. It supports rural land use.		1996	597	91	113	61	0.31	1.7	20/12	0.06	08/08	0.6	0.25	0.08
		1997	630	96	*134*	72	0.37					0.6	0.32	0.16
		1998	814	124	201	109	0.56	2.2d	11/04	0.14	21/08	1.1	0.50	0.19
		1999	821	125										
		2000	815	124										
034003	**Bure at Ingworth** C.A: 164.7 km^2	**59..95**	**671**		**210**		**1.10**	**18.3**	**26/04 1981**	**0.38**	**24/08 1976**	**1.7**	**0.96**	**0.57**
M.A: EA	Local No: Sens.: 8.6 B/full: 4.3m^3s^{-1}													
F.A.R: GI	Level: 12m UE: .01 FAI: 0.977													
Comment: Two ogee profile weirs beneath bridge arches bypassed at 4.3 m^3s^{-1} but maintains modularity. Occasionally drowns owing to lots of weed and reed growth - some contention with coincident SSSI regime. Limited ground and surface water abstractions with some returns from public and agricultural uses. # Rural land use. Catchment comprises sands, gravels and loams.		1996	579	86	162	77	0.84	4.2	12/11	0.40	19/08	1.3	0.70	0.46
		1997	608	91	154	73	0.81	3.6	27/06	0.48	20/08	1.2	0.70	0.51
		1998	829	124	232	110	1.21	5.0	15/04	0.53	13/08	2.1	0.99	0.60
		1999	831	124	256	122	1.34	4.6	03/07	0.62	01/08	2.0	1.21	0.76
		2000	814	121	264	126	1.37	6.0	28/05	0.77	13/09	2.0	1.23	0.84

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
034011	**Wensum at Fakenham** C.A: 161.9 km^2	**67..95**	**691**		**171**		**0.88**	**9.7**	**12/02 1977.**	**0.12**	**16/09 1991**	**1.6**	**0.75**	**0.29**
M.A: EA	Local No: Sens.: 13.2 B/full: 11.0m^3s^{-1}													
F.A.R: GI	Level: 34m UE: .01 FAI: 0.997													
Comment: Compound Crump with low flow notch. A lifting gate for retaining summer levels acts as a sharp-crested weir. Gw abstractions have a minimal impact on runoff. # A low lying rural catchment of Boulder Clay with large pockets of sand and gravel.		1996	615	89	80	47	0.41	2.8	11/03	0.12	22/07	0.8	0.31	0.14
		1997	653	95	94	55	0.48	3.6	19/12	0.22	05/10	0.8	0.40	0.23
		1998	851	123	188	110	0.96	5.9	11/04	0.36	20/08	1.6	0.85	0.40
		1999	817	118	208	122	1.07	3.5	10/03	0.37	11/09	1.8	0.87	0.43
		2000	855	124	211	123	1.08	4.7	26/05	0.38	13/09	1.9	0.99	0.44
034014	**Wensum at Swanton Morley Total** C.A: 397.8 km^2	**69..95**	**674**		**209**		**2.64**	**31.4d**	**27/04 1981**	**0.40**	**31/08 1991**	**4.9**	**2.09**	**0.97**
M.A: EA	Local No: Sens.: 7.0													
F.A.R: GEI	Level: m UE: FAI:													
Comment: Two structures 150m apart operate in parallel. Beneath the two-arch bridge are two Crump weirs which sometimes display non-modular flow as a result of summer weed growth d/s. Three Crump weirs are sited in arches beneath a second bridge (34214). Gw abstractions cause a moderate reduction in the natural runoff. # A Boulder Clay catchment of low relief supporting mainly arable agriculture.		1996	610	91	132	63	1.66	8.0d	20/12	0.48	22/07	3.3	1.29	0.57
		1997	650	96	*142*	68	1.79					3.2	1.38	0.83
		1998	844	125	253	121	3.19	19.8d	10/04	0.95	20/08	6.0	2.50	1.19
		1999	807	120	255	122	3.22	11.3d	10/03	1.08	01/08	5.4	2.79	1.37
		2000	854	127										
034004	**Wensum at Costessey Mill** C.A: 570.9 km^2	**60..95**	**676**		**223**		**4.03**	**36.8d**	**28/04 1981**	**0.30**	**07/08 1991**	**7.3**	**3.04**	**1.28**
M.A: EA	Local No: Sens.: B/full: 18.8m^3s^{-1}													
F.A.R: GI	Level: 5m UE: .02 FAI: 0.958													
Comment: 'Complex' structure comprising 30m Crump weir in main channel; gate and 1.5m wide Crump weir in the mill channel. Gate moved to maintain stable water level u/s; fully automated in 1998: constantly regulating u/s levels to maintain level through the mill race. Also artificial regulation by sluice action at Taversham. Moderate surface and groundwater abstractions. # Rural catchment of predominantly Boulder Clay with some sands and gravels.		1996	596	88	137	61	2.47	11.4d	20/12	0.41	21/07	4.5	2.01	0.63
		1997	639	95										
		1998	832	123	216	97	3.91	14.6d	20/01	1.05	19/08	5.8	3.86	1.76
		1999	813	120	*266*	119	4.81					9.8	3.90	1.83
		2000	836	124	246	110	4.44	10.5d	01/11	1.48	06/10	7.1	4.31	1.93
034005	**Tud at Costessey Park** C.A: 73.2 km^2	**61..95**	**664**		**150**		**0.35**	**10.4**	**26/04 1981**	**0.02**	**25/08 1976**	**0.7**	**0.24**	**0.09**
M.A: EA	Local No: Sens.: 16.4													
F.A.R: GI	Level: 9m UE: .03 FAI: 0.983													
Comment: Four trapezoidal standing-wave flumes under a road bridge have movable dam boards placed across the two outer arches to increase the sensitivity of low flow measurements. The gw catchment is smaller than the topographical catchment with consequent losses to adjacent catchments and low annual gauged runoff. # Surface geology is predominantly Boulder Clay with valley gravels. Rural land use.		1996	559	84	108	72	0.25	2.2	20/12	0.03	22/07	0.6	0.16	0.06
		1997	617	93	164	109	0.38	4.3d	22/01	0.03	19/08	0.5	0.08	0.04
		1998	784	118	99	66	0.23	3.9	10/04	0.04	13/08	0.5	0.13	0.05
		1999	777	117	88	59	0.20	1.7	10/03	0.05	03/08	0.4	0.15	0.06
		2000	801	121	109	73	0.25	3.1	07/11	0.05	17/08	0.5	0.18	0.07
034001	**Yare at Colney** C.A: 231.8 km^2	**59..95**	**654**		**190**		**1.40**	**21.6**	**17/09 1968**	**0.10**	**18/09 1991**	**3.1**	**0.92**	**0.33**
M.A: EA	Local No: Sens.: 9.1 B/full: 19.0m^3s^{-1}													
F.A.R: GI	Level: 8m UE: .02 FAI: 0.965													
Comment: A compound weir 11.9m wide reconstructed in Jan 1964 from single level broad-crested weir. The present structure has a Crump section 8.9m wide seperated by a pier from a broad-crested weir at a lower level. Topographical catchment exceeds contributing area (gw catchment). Mill sluices artificially regulate flow. Gw is abstracted for agricultural uses. # A predominantly rural catchment of Boulder Clay overlying Chalk.		1996	544	83											
		1997	597	91	99	52	0.73	8.3	21/12	0.22	21/08	1.3	0.54	0.27
		1998	782	120	243	128	1.79	13.1	11/04	0.28	11/08	3.9	1.13	0.37
		1999	759	116	225	118	1.65	11.2	10/03	0.32	28/07	3.7	1.19	0.42
		2000	786	120	250	132	1.83	10.6	08/11	0.38?	17/08	3.9	1.40	0.44
034002	**Tas at Shotesham** C.A: 146.5 km^2	**57..95**	**620**		**156**		**0.73**	**62.3**	**16/09 1968**	**0.07**	**16/08 1986**	**1.6**	**0.44**	**0.18**
M.A: EA	Local No: Sens.: 15.8													
F.A.R: GEI	Level: 10m UE: .02 FAI: 0.994													
Comment: Originally a flume set between high rough walls bypassed at 14 m^3s^{-1}. Reconstructed in 1970 as a Flat V Crump and a bypass channel with movable gates added in 1980. Some high flows only partially gauged as water diverts around the station through the bypass channel. Small net augmentation of flows (sewage effluent). # Predominantly Boulder Clay with some valley deposits.		1996	492	79	80	51	0.37	3.0	19/12	0.10	18/08	0.7	0.26	0.12
		1997	563	91	87	56	0.41	5.3	19/12	0.10	24/08	0.8	0.25	0.13
		1998	781	126	207	133	0.96	10.3	10/04	0.18	20/08	2.3	0.53	0.22
		1999	726	117	192	123	0.89	7.9	10/03	0.19	03/08	2.0	0.61	0.22
		2000	731	118	199	128	0.92	9.3	07/11	0.19	17/08	1.9	0.60	0.22
034010	**Waveney at Billingford Bridge** C.A: 149.4 km^2	**68..95**	**605**		**159**		**0.75**	**59.5**	**16/09 1968**	**0.01**	**28/08 1990**	**.1.7**	**0.29**	**0.07**
M.A: EA	Local No: Sens.: 33.1 B/full: 7.5m^3s^{-1}													
F.A.R: REI	Level: 20m UE: .02 FAI: 1.000													
Comment: Two gauging stations located u/s of two bridge arches: i) compound Crump with low flow notch (insensitive, suffers occasional drowning due to d/s weedgrowth); ii) simple Crump with lifting gate to retain higher summer levels. Bypassing occurs at 6.4 m^3s^{-1}, drowning can result from sluice action at Hoxne Mill. Surface and gw abstracted, effluent returned. Affected by Waveney Groundwater Scheme between 1975 and 1979. # The surface geology is predominantly Boulder Clay supporting arable and mixed agriculture.		1996	464	77	53	33	0.25	2.7	20/12	0.04	21/07	0.5	0.16	0.06
		1997	563	93	69	43	0.33	7.4d	20/12	0.05	20/08	0.6	0.15	0.07
		1998	727	120	211	133	1.00	21.7d	10/04	0.08	19/08	2.5	0.38	0.11
		1999	715	118										
		2000	733	121										
034007	**Dove at Oakley Park** C.A: 133.9 km^2	**66..95**	**581**		**154**		**0.65**	**38.5**	**16/09 1968**	**0.10**	**29/07 1990**	**1.4**	**0.29**	**0.15**
M.A: EA	Local No: Sens.: 10.1 B/full: 23.6m^3s^{-1}													
F.A.R: RGI	Level: 21m UE: .01 FAI: 0.997													
Comment: Compound Crump weir with low flow notch and crest tapping; non-modular at 13 m^3s^{-1} and bypassed at 18 m^3s^{-1}. Gw abstractions and effluent returns have a minor net effect on flows, however, between 1975 and 1979 effects more significant due to the Waveney Groundwater Scheme. # A rural catchment of Boulder Clay.		1996	465	80	68	44	0.29	2.7	25/02	0.12	22/09	0.4	0.22	0.13
		1997	544	94										
		1998	673	116	187	121	0.79	18.5	16/04	0.12	25/07	1.8	0.28	0.14
		1999	686	118	179	116	0.76	14.4	10/03	0.13	01/08	1.9	0.42	0.16
		2000	751	129	283	184	1.20	23.2	06/11	0.16	10/09	2.5	0.54	0.18
034006	**Waveney at Needham Mill** C.A: 370.0 km^2	**63..95**	*595*		**150**		**1.76**	**113.3**	**16/09 1968**	**0.17**	**30/07 1990**	**4.0**	**0.76**	**0.31**
M.A: EA	Local No: Sens.: B/full: 23.0m^3s^{-1}													
F.A.R: RI	Level: 17m UE: .01 FAI: 0.999													
Comment: Compound Crump weir 8.5m wide in main channel with single crested Crump in mill bypass. Sluice action at mill 2.4 km u/s is infrequent but evident in flow records. Suffers from weed growth problems. Surface water abstractions, and use of river gravels as an aquifer, influence flows but overall impact is minimal. Record affected by the Waveney Groundwater Scheme between 1975 and 1979. # Predominantly a Boulder Clay catchment with largely rural land use.		1996	462	78	*54*	36	0.63					1.2	0.43	0.24
		1997	554	93										
		1998	701	118	171	114	2.01	29.9	10/04	0.25	13/08	5.2	0.74	0.30
		1999	701	118	183	122	2.14	24.2	10/03	0.31	02/08	5.1	1.21	0.38
		2000	743	125	244	163	2.86	31.5	07/11	0.32	14/08	7.0	1.34	0.40
035013	**Blyth at Holton** C.A: 92.9 km^2	**70..95**	**592**		**133**		**0.39**	**32.2**	**01/02 1979**	**0.03**	**12/08 1990**	**0.8**	**0.13**	**0.06**
M.A: EA	Local No: Sens.: B/full: 31.8m^3s^{-1}													
F.A.R: GI	Level: 12m UE: FAI:													
Comment: An asymmetric compound Crump weir with low flow notch. Gw abstractions have a significant effect on the natural runoff. The river responds very rapidly to rainfall. # The catchment is comprised of 44% Boulder Clay; 42% Crag and 13% alluvium. The land use is predominantly rural.		1996	452	76	60	45	0.18	4.7	19/12	0.05	22/08	0.4	0.09	0.05
		1997	515	87	55	41	0.16	10.5	19/12	0.05	20/08	0.3	0.08	0.06
		1998	722	122	176	132	0.52	17.6	15/04	0.06	21/08	1.5	0.12	0.07
		1999	697	118	155	117	0.46	7.7	02/03	0.08	11/09	1.3	0.17	0.08
		2000	755	128	238	179	0.70	16.8	28/05	0.08	20/08	1.6	0.24	0.09
035003	**Alde at Farnham** C.A: 63.9 km^2	**61..95**	**599**		**141**		**0.28**	**15.6**	**10/12 1965**	**0.02**	**11/08 1990**	**0.6**	**0.10**	**0.04**
M.A: EA	Local No: Sens.: 17.4													
F.A.R: GI	Level: 5m UE: <.01 FAI: 0.990													
Comment: Broad-crested weir of ogee section with low flow notch and steel plate divide walls. Significant gw abstractions; some water exported. The gw contours show only token relationship to the surface topography. # The catchment is comprised of Boulder Clay and sand. Predominantly rural land use.		1996	453	76	59	42	0.12	2.2	26/02	0.04	20/08	0.2	0.07	0.04
		1997	528	88	59	42	0.12	8.6	20/12	0.03	20/08	0.2	0.06	0.04
		1998	695	116	157	111	0.32	15.5	16/04	0.04	13/08	0.8	0.09	0.04
		1999	715	119	183	130	0.37	*21.7*	*10/03*	0.05	02/09	0.9	0.15	0.05
		2000	800	134										

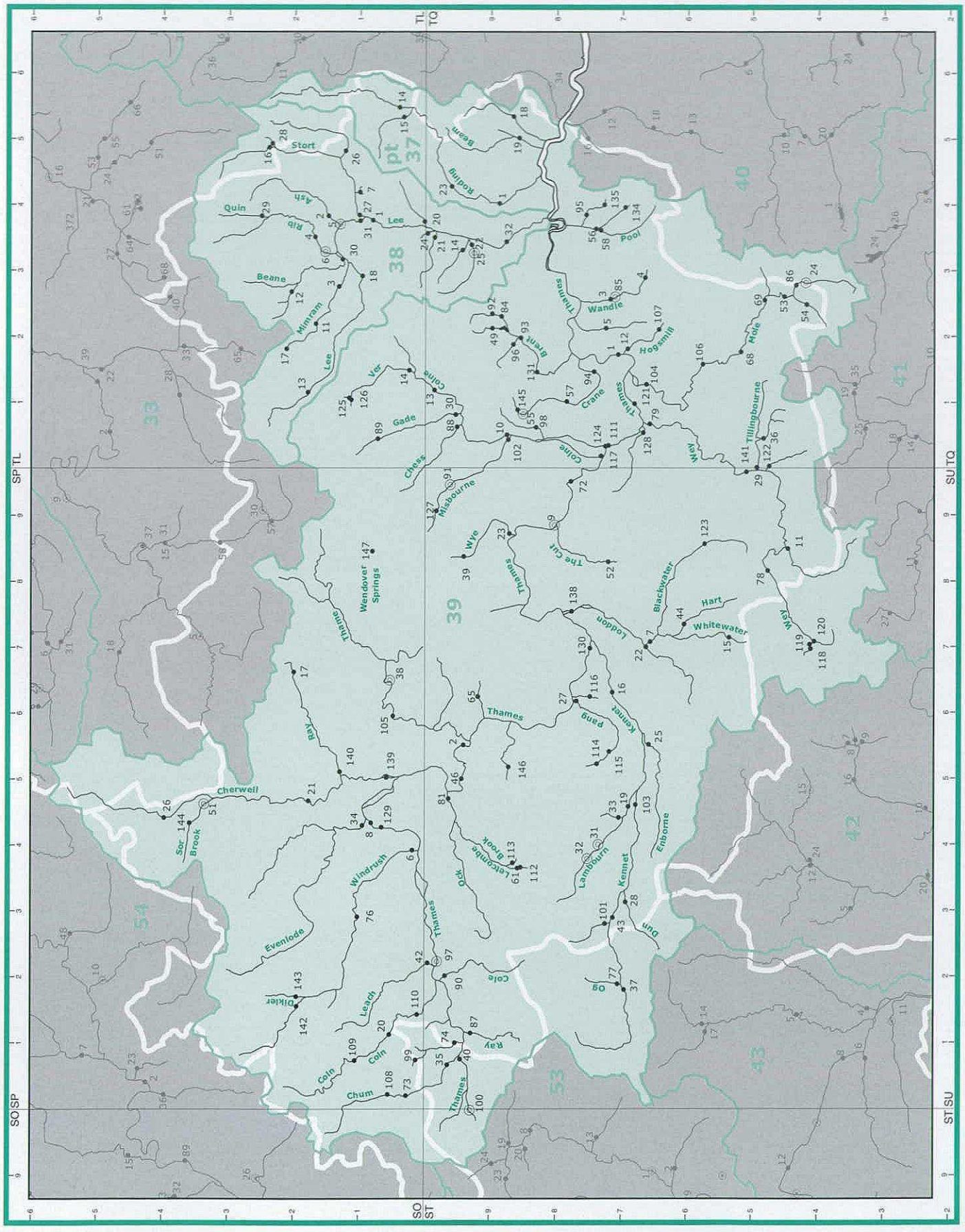
		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
035004	**Ore at Beversham Bridge** C.A: 54.9 km^2	**65..95**	**607**		**175**		**0.30**	**11.9**	**26/12 1985**	**0.02**	**26/06 1976**	**0.6**	**0.14**	**0.07**
M.A: EA	Local No:													
F.A.R: GI	Level: 2m Sens.: 11.9 UE: <.01 B/full: 12.0m^3s^{-1} FAI: 0.989													
Comment: A compound Crump weir with low flow notch and crest tapping that occasionally drowns as a result of d/s weedgrowth and siltation. Gw catchment exceeds topographic catchment. Gw abstractions make a moderate reduction in the natural runoff. # The catchment is 60% Boulder Clay and 40% sand and gravel. Rural land use.		1996	457	75	78	45	0.14	1.8	31/12	0.03	16/08	0.2	0.11	0.05
		1997	534	88	71	41	0.12	3.3	19/12	0.04	01/06	0.2	0.08	0.05
		1998	686	113	165	94	0.29	6.4	16/04	0.03	14/08	0.6	0.13	0.06
		1999	718	118	176	101	0.31	4.1	25/12	0.06	31/07	0.6	0.16	0.08
		2000	798	131	300	171	0.52	9.0	30/10	0.06	21/08	1.3	0.18	0.08
035002	**Deben at Naunton Hall** C.A: 163.1 km^2	**64..95**	**598**		**144**		**0.74**	**29.5**	**17/09 1968**	**0.01**	**10/07 1976**	**1.8**	**0.30**	**0.09**
M.A: EA	Local No:													
F.A.R: RGI	Level: 6m Sens.: 10.6 UE: B/full: 12.3m^3s^{-1} FAI:													
Comment: A compound Crump (with crest tapping) and low flow notch. Bypassing occurs at 12 m^3s^{-1} and seasonal weed growth causes drowning. Some gw is transfered to beyond the catchment boundary and some is abstracted from within the catchment. The overall impact is to significantly reduce the natural runoff. # The catchment is largely Boulder Clay and sand and gravel. Rural land use.		1996	446	75	45	31	0.23					0.6	0.16	0.04
		1997	537	90	55	38	0.29	11.6	20/12	0.03	02/06	0.5	0.14	0.05
		1998	668	112	172	119	0.89	20.9	16/04	0.06	24/07	1.9	0.25	0.09
		1999	715	120	170	118	0.88	15.0	03/03	0.06	31/07	2.1	0.36	0.11
		2000	771	129	246	171	1.27	17.5	30/10	0.08	25/06	3.2	0.50	0.12
035008	**Gipping at Stowmarket** C.A: 128.9 km^2	**64..95**	**579**		**150**		**0.62**	**34.4**	**01/02 1979**	**0.05**	**23/09 1989**	**1.4**	**0.22**	**0.08**
M.A: EA	Local No:													
F.A.R: GEI	Level: 25m Sens.: 11.2 UE: .02 B/full: 32.2m^3s^{-1} FAI: 0.998													
Comment: Compound Crump weir rebuilt in 1966 from a compound broad-crested weir. All flows contained. Minimal natural storage within the catchment and the Boulder Clay gives a flashy response. Abstractions from groundwater and effluent returns broadly balance. High flows have been significantly affected by flood relief scheme since the late 1980s. # Boulder Clay with valley sand and gravel. Predominantly rural land use.		1996	435	75	59	39	0.24	5.6	25/02	0.06	22/07	0.5	0.13	0.07
		1997	500	86	62	41	0.25	9.4	19/12	0.06	16/08	0.5	0.13	0.07
		1998	650	112	172	115	0.70	17.6	15/04	0.08	12/08	1.9	0.25	0.09
		1999	673	116	171	114	0.70	11.0	15/09	0.08	02/08	1.8	0.36	0.10
		2000	770	133	279	186	1.14	28.5	30/10	0.10	17/08	2.8	0.46	0.12
035010	**Gipping at Bramford** C.A: 298.0 km^2	**69..95**	**575**		**123**		**1.16**	**42.4**	**02/02 1979**	**0.04**	**06/08 1976**	**2.6**	**0.54**	**0.18**
M.A: EA	Local No:													
F.A.R: GI	Level: 6m Sens.: 16.2 UE: .02 B/full: 17.0m^3s^{-1} FAI: 0.943													
Comment: Compound Crump weir with 2m, 5m & 12m sections. Flood gate (automated during summer 2001) converts 12m section to a sharp-edge weir. Bypassing occurs at 12 m^3s^{-1} and sluice operation on the weir is evident in the daily flow record. Gw abstractions have a significant impact on the natural runoff. Flows significantly affected by Ipswich flood relief scheme since the late 1980s. # The catchment is 90% Boulder Clay, the remaining 10% is of Crag deposits. Predominantly rural land use.		1996	431	75	51	41	0.48	5.5	26/02	0.10	09/08	1.0	0.36	0.14
		1997	509	89	44	36	0.41	8.4	20/12	0.06	13/08	0.7	0.27	0.11
		1998	657	114	133	108	1.26	14.0	16/04	0.22	14/08	3.1	0.54	0.25
		1999	694	121	158	128	1.49	23.8	25/04	0.22	31/08	3.7	0.92	0.28
		2000	765	133	212	172	2.00	28.0	30/10	0.28	17/08	5.0	1.06	0.34
036012	**Stour at Kedington** C.A: 76.2 km^2	**68..95**	**607**		**321**		**0.78**	**42.0**	**16/09 1968**	**0.01**	**08/08 1976**	**2.2**	**0.35**	**0.04**
M.A: EA	Local No:													
F.A.R: RGEI	Level: 53m Sens.: 29.9 UE: <.01 B/full: 10.0m^3s^{-1} FAI: 0.990													
Comment: 'Essex' profile (modified Flat V Crump) weir, insensitive. Crest tapping prone to siltation making modular limit uncertain until 1970, when channel improved for Ely/Ouse Transfer Scheme making station full range. Ponding u/s above 11.5 m^3s^{-1}. Structure built on peat, some percolation beneath. Naturalised flows 1968-1976. Post '76 adjustments made for Ely/Ouse Transfer Scheme. # Rural catchment on Upper Stour. Boulder Clay overlying Chalk, some outcropping.		1996	445	73	633	197	1.53	6.6	09/01	0.03	23/06	3.3	1.13	0.25
		1997	521	86	830	259	2.00	5.1	19/12	0.25	29/09	4.0	1.13	0.39
		1998	701	115	461	144	1.11	8.4	25/12	0.02	24/06	3.3	0.61	0.13
		1999	701	115	303	94	0.73	10.7	07/03	0.07	20/06	2.6	0.32	0.12
		2000	836	138	332	103	0.80	15.6	06/11	0.03	03/09	1.7	0.35	0.05
036011	**Stour Brook at Sturmer** C.A: 34.5 km^2	**68..95**	**602**		**210**		**0.23**	**25.3**	**15/09 1968**	**0.02**	**18/07 1973**	**0.5**	**0.10**	**0.05**
M.A: EA	Local No:													
F.A.R: GEI	Level: 55m Sens.: 29.8 UE: .06 B/full: 5.7m^3s^{-1} FAI: 1.000													
Comment: 'Essex' profile (modified Flat V Crump) weir with crest tapping, insensitive. Immediately d/s of Haverhill - urban runoff and STW discharges cause short, sharp peaks. Modular limit approx. 5.0 m^3s^{-1}. Adjustments were made for industrial and sewage effluent and gw abstractions from 1968 to 1976. # Rural, agricultural catchment, with the exception of Haverhill, at the head of the R. Stour. Mostly Boulder Clay with some of the underlying sand and gravel and Chalk outcropping.		1996	434	72	119	57	0.13	3.6	27/08	0.03	25/09	0.2	0.08	0.05
		1997	500	83	77	37	0.08	2.6	13/07	0.03	06/08	0.1	0.06	0.04
		1998	667	111	203	97	0.22	5.5	10/12	0.04	01/08	0.6	0.09	0.06
		1999	664	110	226	108	0.25	6.1	28/01	0.05	30/08	0.5	0.13	0.07
		2000	823	137	399	190	0.44	17.3	05/11	0.05	12/09	0.9	0.19	0.07
036010	**Bumpstead Brook at Broad Green** C.A: 28.3 km^2	**68..95**	**604**		**155**		**0.14**	**21.0**	**15/09 1968**	**0.00**	**08/12 1990**	**0.3**	**0.02**	**>0.00**
M.A: EA	Local No:													
F.A.R: GIN	Level: 56m Sens.: UE: <.01 B/full: 6.0m^3s^{-1} FAI: 1.000													
Comment: 'Essex' profile (modified Flat V Crump) weir with crest tapping and high flow spillway. Modular limit approx. 6.0 m^3s^{-1}. Approx. limit of gauging is 12.5 m^3s^{-1}. Naturalised flows from 1968 to 1976, only minor adjustments needed to the gauged dmfs, virtually natural catchment. # Rural catchment at the head of the R. Stour. Complete cover of Boulder Clay over glacial gravel and Chalk.		1996	434	72	58	37	0.05	3.5	12/02	>0.00	26/09	0.1	0.01	0.01
		1997	493	82	30	19	0.03	2.0	19/12	>0.00	05/08	0.1	>0.00	>0.00
		1998	656	109	141	91	0.13	9.6	15/04	>0.00	13/08	0.3	0.03	0.01
		1999	650	108	155	100	0.14	7.5	27/01	>0.00	28/07	0.3	0.03	0.01
		2000	809	134	310	200	0.28	11.2	30/10	>0.00	11/09	0.7	0.08	0.01
036008	**Stour at Westmill** C.A: 224.5 km^2	**60..95**	**599**		**183**		**1.30**	**60.0**	**16/09 1968**	**0.02**	**10/09 1966**	**2.6**	**0.61**	**0.13**
M.A: EA	Local No:													
F.A.R: RGEI	Level: 33m Sens.: 15.2 UE: .02 B/full: 25.0m^3s^{-1} FAI: 0.986													
Comment: Compound trapezoidal critical depth flume with d/s level recorder. Affected by weed growth but rarely drowns out. Above 1.15m some flow passes over a broad-crested weir 100m u/s into a spillway. Since 22/3/71 flow augmented by intermittent pumping from the Ely/Ouse Transfer Scheme, archived flows adjusted for this until 1976. (Naturalised flows 1960 to 1976.) # Rural, agricultural catchment situated on Upper Chalk overlain by sand and gravel with a mantle of semi-pervious Boulder Clay.		1996	436	73	166	91	1.18	12.2	12/02	0.19	16/06	2.2	0.93	0.33
		1997	510	85	197	108	1.40	9.2	19/12	0.28	01/11	2.6	0.84	0.38
		1998	674	113	203	111	1.45	14.3	09/04	0.16	22/08	2.9	0.74	0.30
		1999	678	113	190	104	1.35	15.3	08/03	0.14	14/07	2.8	0.75	0.23
		2000	810	135	299	163	2.13	25.6	06/11	0.12?	17/08	5.0	1.11	0.18
036002	**Glem at Glemsford** C.A: 87.3 km^2	**60..95**	**600**		**168**		**0.46**	**24.1d**	**16/09 1968**	**0.04**	**03/08 1992**	**1.0**	**0.18**	**0.07**
M.A: EA	Local No:													
F.A.R: GI	Level: 34m Sens.: 18.9 UE: .01 B/full: 20.0m^3s^{-1} FAI: 0.987													
Comment: Trapezoidal flume with bypassing at high flows; modest modular limit; d/s water level recorder to allow for drowning. Occasional problems with weedgrowth. Highest floods unreliably gauged. Naturalised flows from 1960 to Sep 1976. # Rural catchment of the Upper Stour. Upper Chalk (exposed in river valley sides) is overlain by glacial sand and gravel and semi-pervious Boulder Clay.		1996	443	74	69	41	0.19	5.3	25/02	**0.02**	**27/09**	0.3	0.14	0.03
		1997	533	89	70	42	0.19	4.0d	19/12	**0.01**	**04/10**	0.3	0.16	0.02
		1998	679	113	160	95	0.44	8.2	10/04	0.05?	16/08	1.2	0.14	0.06
		1999	693	116	168	100	0.46	7.7	23/12	0.08	04/09	1.1	0.22	0.09
		2000	812	135	282	168	0.78	11.6	30/10	0.08	17/08	1.8	0.36	0.09
036004	**Chad Brook at Long Melford** C.A: 47.4 km^2	**65..95**	**590**		**170**		**0.26**	**15.0**	**16/09 1968**	**0.00**	**04/08 1995**	**0.6**	**0.12**	**0.03**
M.A: EA	Local No:													
F.A.R: GI	Level: 35m Sens.: UE: <.01 B/full: 11.0m^3s^{-1} FAI: 1.000													
Comment: 'Essex' profile (modified Flat V Crump) weir with low flow side weir which drowns in summer due to weed growth. High flow spillway accurate to 1.1m. Full range. Theoretically rated. Naturalised flows from 1965 to 1976. # Rural catchment, tributary of the Upper Stour. Boulder Clay over Chalk.		1996	433	73	84	49	0.13	1.8	25/02	0.04	27/05	0.2	0.10	0.06
		1997	517	88	45	26	0.07	1.5	19/12	0.01	28/09	0.1	0.03	0.02
		1998	675	114	172	101	0.26	8.0	10/04	0.04	01/06	0.6	0.09	0.06
		1999	663	112	167	98	0.25	3.2	23/12	0.04	02/08	0.5	0.15	0.06
		2000	796	135	299	176	0.45	8.2	06/11	0.04	15/08	1.0	0.23	0.04
036007	**Belchamp Brook at Bardfield Bridge** C.A: 58.6 km^2	**60..95**	**562**		**95**		**0.18**	**12.1**	**29/01 1988**	**>0.00**	**27/07 1963**	**0.4**	**0.05**	**0.02**
M.A: EA	Local No:													
F.A.R: GIN	Level: 27m Sens.: 33.9 UE: <.01 B/full: 9.0m^3s^{-1} FAI: 0.997													
Comment: Trapezoidal flume with throat tapping. Full range station in winter, occasionally drowns in summer due to weed growth. Naturalised flows from 1965 to 1976, only minimal adjustments needed to flows since then. # Rural. Tributary of the Stour. Mixed geology: mostly glacial deposits overlying the predominant Chalk.		1996	405	72	38	40	0.07	1.9	25/02	0.01	01/08	0.1	0.04	0.02
		1997	485	86	19	20	0.04	0.5d	19/12	>0.00	01/08	0.1	0.03	0.01
		1998	625	111	68	72	0.13	2.1d	15/04	0.01	12/08	0.3	0.06	0.02
		1999	685	122	105	111	0.20	2.6d	28/01	0.02	02/08	0.5	0.08	0.03
		2000	793	141	225	237	0.42					1.1	0.14	0.04

				Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
036015	**Stour at Lamarsh**		C.A: 480.7 km^2	**72..95**	**591**		**158**		**2.41**	**61.0**	**02/02 1979**	**0.19**	**28/08 1976**	**4.7**	**1.37**	**0.62**
M.A: EA	Local No:	Sens.: 3.5	B/full: 35.0m^3s^{-1}													
F.A.R: RPGEI	Level: 18m	UE: .02	FAI: 0.970													
Comment: Flat V weir with low flow sharp-crested rectangular notch. Flood banks contain approx. 35.0 m^3s^{-1}. No spillway. Breaching u/s may cause bypassing. Naturalised flows 1972-1976, since then adjustments needed for abstractions, discharges and PWS predominantly for Haverhill. Ely/Ouse Transfer Scheme adjustments already made. # Predominantly rural catchment except for Haverhill. Upper Chalk beneath whole catchment, covered mainly by Boulder Clay and London Clay in S.				1996	427	72	95	60	1.45	21.1	26/02	0.36	15/06	2.1	1.17	0.58
				1997	508	86	104	66	1.58	26.3	20/12	0.47	29/10	2.6	1.12	0.56
				1998	662	112	156	99	2.37	33.4	10/04	0.34	20/08	4.5	1.26	0.53
				1999	674	114										
				2000	803	136	277	175	4.21	38.3	31/10	0.51	17/08	10.8	1.77	0.62
036006	**Stour at Langham**		C.A: 578.0 km^2	**62..95**	**585**		**161**		**2.94**	**91.0**	**17/09 1968**	**0.09**	**09/07 1976**	**6.2**	**1.74**	**0.55**
M.A: EA	Local No:	Sens.: 7.1	B/full: 40.0m^3s^{-1}													
F.A.R: RPGI	Level: 6m	UE: .01	FAI: 0.962													
Comment: Twin-trapezoidal flume, throat tapping. Spillway channel with thin-plate weir constructed in 12/85 takes some flow above 1.45m. Rating combines the elements. Excellent site. Bypassing also occurs over opposite bank above 1.85m. More bypassing possible from 0.5km u/s during extreme events. Naturalised flows to 9/76. Occasional high peaks due to mill operation and augmention by intermittent pumping from Ely/Ouse Transfer Scheme. Occasional augmentation from SAGS (Stour Augmentation Groundwater Scheme) borehole pumping. # Mainly rural catchment. Chalk outcrops in north, London Clay in south, all covered by semi-pervious Boulder Clay.				1996	425	73	103	64	1.89	16.8	26/02	0.40	25/07	3.1	1.76	0.52
				1997	512	88	110	68	2.01	15.2	20/12	0.39	02/10	3.5	1.44	0.61
				1998	658	112	160	99	2.93	26.8	11/04	0.32	21/08	6.5	1.81	0.57
				1999	666	114	160	99	2.92	20.6	09/03	0.33	31/07	6.0	2.09	0.61
				2000	800	137	267	166	4.88	42.8	08/11	0.57	13/09	12.3	2.39	0.78
036003	**Box at Polstead**		C.A: 53.9 km^2	**60..95**	**583**		**124**		**0.21**	**10.1**	**29/01 1988**	**0.03**	**26/08 1976**	**0.4**	**0.13**	**0.06**
M.A: EA	Local No:	Sens.: 18.9	B/full: 11.0m^3s^{-1}													
F.A.R: GEI	Level: 16m	UE: <.01	FAI: 0.994													
Comment: Trapezoidal flume with high flow rated spillway. Throat tapping; rarely drowns. Subject to reed/weed growth problems. Naturalised flows from 1961 to 1976. Minimal ground and surface water abstractions for agricultural purposes. # Rural catchment, tributary of the Stour. Predominantly London Clay; Chalk in N, all overlain by superficial deposits.				1996	398	68	59	48	0.10	1.0	25/02	0.03	22/07	0.2	0.09	0.04
				1997	489	84	48	39	0.08	0.7	19/12	0.03	16/08	0.1	0.07	0.04
				1998	647	111	102	82	0.17	3.8	15/04	0.04	12/08	0.3	0.12	0.05
				1999	627	108	120	97	0.21	1.9	24/12	0.05	02/08	0.4	0.14	0.07
				2000	770	132	219	177	0.37	7.7	30/10	0.06	16/08	0.8	0.18	0.08
036009	**Brett at Cockfield**		C.A: 25.7 km^2	**68..95**	**609**		**151**		**0.12**	**8.1**	**15/09 1968**	**0.00**	**17/10 1991**	**0.3**	**0.03**	**>0.00**
M.A: EA	Local No:	S.ens.:	B/full: 8.0m^3s^{-1}													
F.A.R: N	Level: 59m	UE: <.01	FAI: 1.000													
Comment: 'Essex' profile (modified Flat V Crump weir). No spillway. Modular limit of 0.66m theoretically derived. No telemetry but planned for future. Naturalised flows from 1969 to 1976, only minimal adjustments needed since. # Small, rural catchment on headwaters of the Brett, a tributary of the R. Stour. Upper Chalk underlies the whole catchment with a mantle of Boulder Clay above.				1996	448	74	30	20	0.02	0.8	25/02	0.00	15/07	0.1	0.01	
				1997	517	85	25	17	0.02	1.3	19/12	0.00	06/08	0.0	0.00	
				1998	689	113	148	98	0.12	6.1	15/04	>0.00	16/09	0.3	>0.00	>0.00
				1999	672	110	156	103	0.13	1.9	24/12	>0.00	02/08	0.3	0.06	0.01
				2000	822	135	334	221	0.27	7.2	30/10	0.01	14/09	0.6	0.10	0.01
036005	**Brett at Hadleigh**		C.A: 156.0 km^2	**62..95**	**582**		**137**		**0.68**	**26.6**	**10/10 1987**	**0.03**	**26/08 1976**	**1.5**	**0.31**	**0.09**
M.A: EA	Local No:	Sens.:	B/full: 25.0m^3s^{-1}													
F.A.R: GEI	Level: 18m	UE: <.01	FAI: 0.994													
Comment: 'Essex' profile (modified Flat V Crump) weir with low flow side weir and high flow rated spillway. D/s water level recorder to allow for drowning. Naturalised flows from 1962 to 1976. Post '76 adjustments, for gw abstractions for PWS and industrial abstraction from surface water, are not made to the gauged daily mean flows. Minor effluent returns may affect flow. # Predominantly rural catchment underlain by Upper Chalk covered mainly with semi-pervious Boulder Clay.				1996	420	72	38	28	0.19	3.8	25/02	0.03	21/08	0.4	0.12	0.05
				1997	495	85	34	25	0.17	4.0	19/12	**0.03**	**21/08**	0.3	0.11	0.04
				1998	670	115	137	100	0.68	15.4	16/04	0.09	05/08	1.6	0.27	0.11
				1999	658	113	142	104	0.70	6.3	03/03	0.14	04/08	1.5	0.40	0.16
				2000	793	136	257	188	1.27	15.3	06/11	0.20	26/08	3.1	0.52	0.22
037022	**Holland Brook at Thorpe le Soken**		C.A: 54.9 km^2	**70..95**	**537**		**125**		**0.22**	**13.5**	**29/01 1995**	**0.00**	**08/09 1990**	**0.4**	**0.06**	**0.01**
M.A: EA	Local No:	Sens.: 60.2	B/full: 9.0m^3s^{-1}													
F.A.R: GI	Level: 1m	UE:	FAI:													
Comment: 'Essex' profile (modified Flat V Crump) weir (very insensitive) with crest tapping. Tidal influence very important, gauging limits variable due to d/s tidal conditions, with drowning starting at very low levels. Very gentle river gradient makes siltation a major problem, accompanied by weed growth. Abstractions significant at low flows. Flows naturalised 1970-1976. # Rural catchment covered with gravel sands; gravel and loam with London Clay being exposed in valleys and NE of the area.				1996	396	74	38	30	0.07	2.6	10/11	>0.00	06/08	0.2	0.04	0.01
				1997	503	94	*81*	65	0.14					0.1	0.03	0.01
				1998	616	115	148	118	0.26	6.1	02/11	0.01	17/08	0.7	0.10	0.01
				1999	627	117	208	166	0.36	6.6	19/08	0.04	29/07	0.7	0.21	0.05
				2000	752	140										
037012	**Colne at Poolstreet**		C.A: 65.1 km^2	**63..95**	**579**		**131**		**0.27**	**19.2**	**25/08 1987**	**0.00**	**10/07 1994**	**0.7**	**0.06**	**>0.00**
M.A: EA	Local No:	Sens.:	B/full: 7.0m^3s^{-1}													
F.A.R: GI	Level: 43m	UE: <.01	FAI: 0.992													
Comment: Trapezoidal flume with throat tapping. V notch plate installed in summer to measure low flows. High flow spillway (above 1.34m). Above 1.6m flows are estimated as major bypassing occurs. Rarely non-modular. Naturalised flows from 1963-1976. Great Yeldham PWS borehole may influence flows, but unquantifiable. Period of Ely/Ouse Transfer Scheme pumping in 1982. # Rural, upland (for East Anglia) catchment of the R. Colne. Upper Chalk underlies whole catchment, London Clay present in southern half, all overlain with Boulder Clay.				1996	414	72	53	40	0.11	4.9	12/02	0.01	08/09	0.2	0.04	0.01
				1997	492	85	*30*	23	0.06					0.1	0.02	0.01
				1998	650	112										
				1999	712	123	199	152	0.41	5.4d	04/01	0.01	28/07	1.0	0.12	0.03
				2000	802	139	*293*	224	0.60					1.8	0.20	0.03
037024	**Colne at Earls Colne**		C.A: 154.2 km^2	**71..95**	**571**		**141**		**0.69**	**21.5**	**07/01 1993**	**0.05**	**25/08 1976**	**1.4**	**0.31**	**0.11**
M.A: EA	Local No:	Sens.: 20.1	B/full: 15.0m^3s^{-1}													
F.A.R: GEI	Level: 25m	UE:	FAI:													
Comment: 'Essex' profile (modified Flat V Crump) weir with crest tapping prone to siltation. Flows are estimated when siltation severely affects response of station. Low modular limit - approx. 0.5m. No spillway. Naturalised flows 1971-76. Adjustments now needed for additions and abstractions. # Predominantly rural catchment, just d/s of Halstead. Upper Chalk underlies whole catchment, mostly overlain by London Clay with Boulder Clay above.				1996	405	71	60	43	0.29	7.7	13/02	0.05	03/07	0.5	0.20	0.07
				1997	494	87	*45*	32	0.22					0.4	0.15	0.07
				1998	640	112	144	102	0.71	*21.6*	*16/04*	0.07	11/08	1.4	0.27	0.09
				1999	691	121	184	130	0.90	14.4	05/07	0.11	02/08	1.9	0.42	0.15
				2000	802	140	288	204	1.40	16.9	30/10	0.09?	23/09	3.8	0.49	0.13
037005	**Colne at Lexden**		C.A: 238.2 km^2	**59..95**	**572**		**137**		**1.04**	**24.8**	**11/10 1987**	**0.03**	**30/08 1965**	**2.1**	**0.56**	**0.20**
M.A: EA	Local No:	Sens.: 9.7	B/full: 16.0m^3s^{-1}													
F.A.R: RPI	Level: 8m	UE: .01	FAI: 0.950													
Comment: Big trapezoidal flume with d/s level recorder. Occasional weedgrowth problems. Spillway flow commences at 17.0 m^3s^{-1} (1.75m), flows above this are estimated. Bypassed on the lb at very high flows. Naturalised flows for period 1959 to 1976. Provides flood warning for Colchester. # Rural catchment. Upper Chalk with surface cover of semi-pervious Boulder Clay on which pasture and arable cultivation predominate.				1996	410	72	71	52	0.53	6.2	26/02	0.12	09/08	0.9	0.39	0.17
				1997	500	87	54	39	0.41	5.6	19/12	0.10	24/08	0.8	0.32	0.13
				1998	637	111	122	89	0.92	10.3	16/04	0.10	20/08	2.1	0.57	0.19
				1999	678	119	153	112	1.15	10.7	07/07	0.19	03/08	2.5	0.74	0.29
				2000	790	138	243	177	1.83	*21.3*	*31/10*	0.21	17/08	4.5	0.84	0.27
037016	**Pant at Copford Hall**		C.A: 62.5 km^2	**65..95**	**612**		**191**		**0.38**	**16.8**	**16/09 1968**	**>0.00**	**13/08 1976**	**1.1**	**0.12**	**0.02**
M.A: EA	Local No:	Sens.: 29.7	B/full: 12.0m^3s^{-1}													
F.A.R: RGI	Level: 58m	UE: .01	FAI: 0.998													
Comment: 'Essex' profile (modified Flat V Crump) weir (insensitive) with crest tapping. Measures up to 12.0 m^3s^{-1}, flows above this are estimated because of the spillway. Naturalised flows 1965-1976. Intermittent pumping of Ely/Ouse Transfer Scheme has major effect on station being only 5km d/s of the Great Sampford Outfall. # Rural tributary of the R. Blackwater. Boulder Clay over glacial gravel on Upper Chalk, gravel exposed along the whole river valley.				1996	437	71	222	116	0.44	4.8	12/02	>0.00	13/01	1.3	0.09	0.02
				1997	493	81	412	216	0.82	2.7	25/02	0.01	12/07	1.9	0.51	0.06
				1998	676	110	251	131	0.50	7.7	15/04	>0.00	07/05	1.2	0.28	0.02
				1999	637	104	170	89	0.34	7.0	28/01	0.01	28/06	1.1	0.11	0.04
				2000	800	131										
037017	**Blackwater at Stisted**		C.A: 139.2 km^2	**69..95**	**585**		**178**		**0.79**	**18.7**	**29/01 1995**	**0.03**	**05/09 1994**	**1.5**	**0.43**	**0.16**
M.A: EA	Local No:	Sens.: 17.8	B/full: 18.0m^3s^{-1}													
F.A.R: RGEI	Level: 32m	UE: .02	FAI: 0.986													
Comment: 'Essex' profile (modified Flat V Crump) weir with crest tapping. No spillway. Modest modular limit affected by weed growth. Urban runoff from Braintree. Naturalised flows 1969-1976. Minor adjustments needed for ground and surface water abstractions; sewage and industrial effluent and Ely Ouse/Essex discharges, net effect - minor export of water. # Predominantly rural, plus Braintree. Upper two-thirds of catchment Chalk, remainder London Clay (exposed in valleys), all overlain with Boulder Clay and glacial gravel.				1996	420	72	198	111	0.87	10.1	26/02	0.08	25/06	1.6	0.60	0.25
				1997	498	85	223	125	0.98	5.3	19/12	0.07	12/07	2.0	0.65	0.23
				1998	666	114	214	120	0.95	*19.2*	*15/04*	0.13	24/06	1.7	0.55	0.22
				1999	644	110	175	98	0.77	15.4	28/01	0.13	30/07	1.5	0.40	0.19
				2000	795	136	280	157	1.23	*19.9*	*07/11*	0.13	24/08	2.9	0.47	0.16

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
037010	**Blackwater at Appleford Bridge** C.A: 247.3 km^2	**62..95**	**579**		**158**		**1.24**	**26.8**	**29/01 1988**	**0.09**	**06/10 1964**	**2.3**	**0.77**	**0.33**
M.A: EA	Local No: Sens.: 9.3 B/full: 20.0m^3s^{-1}													
F.A.R: RPGI	Level: 15m UE: .02 FAI: 0.989													
Comment: Double throated trapezoidal flume with throat tappings and a high flow rated spillway starting at 1.80m. Drowning starts at 1.2m (13.0 m^3s^{-1}), degree of drowning variable. Naturalised flows from 1962-1976. Intermittently affected, since 1971, by Ely/Ouse Transfer Scheme pumping, significantly affected in the late 1980s and 1990s. Abstractions from both Chalk and gravel aquifers for PWS. # Rural catchment. Boulder Clay over London Clay with Chalk in the headwaters.		1996	413	71	160	101	1.25	6.9	26/02	0.22	14/06	2.1	1.04	0.51
		1997	505	87	*168*	106	1.32					2.4	0.95	0.38
		1998	650	112	170	108	1.33	10.3	17/04	0.30	09/10	2.4	0.89	0.38
		1999	644	111	160	101	1.25	14.3	25/12	0.31	31/07	2.2	0.83	0.37
		2000	776	134	247	156	1.93	18.2	07/11	0.32?	25/08	4.7	0.95	0.40
037009	**Brain at Guithavon Valley** C.A: 60.7 km^2	**62..95**	**582**		**195**		**0.38**	**11.5**	**16/10 1987**	**0.09**	**20/07 1964**	**0.6**	**0.26**	**0.16**
M.A: EA	Local No: Sens.: 12.2 B/full: 17.0m^3s^{-1}													
F.A.R: GEI	Level: 16m UE: .06 FAI: 1.000													
Comment: 'Essex' profile (modified Flat V Crump) weir with throat tapping. Drowning occurs at very low levels but with minimal effect. Station prone to vandalism. Some abstractions for agriculture; naturalised flows available from 1962 to 1976. # Mainly rural catchment, except for Witham and Braintree, on a tributary of the R. Blackwater. Boulder Clay over London Clay.		1996	400	69	120	62	0.23	1.9	25/02	0.12	16/08	0.3	0.20	0.14
		1997	520	89										
		1998	656	113	168	86	0.32	2.1d	16/04	0.12	19/08	0.6	0.23	0.13
		1999	614	105	179	92	0.35	4.0d	28/01	0.15	27/07	0.6	0.26	0.16
		2000	779	134	310	159	0.60	*12.2*	*30/10*	0.16?	04/09	1.1	0.32	0.18
037011	**Chelmer at Churchend** C.A: 72.6 km^2	**63..95**	**591**		**154**		**0.35**	**19.1**	**09/10 1987**	**0.01**	**14/07 1976**	**0.8**	**0.15**	**0.05**
M.A: EA	Local No: Sens.: 17.0 B/full: 9.0m^3s^{-1}													
F.A.R: I	Level: 52m UE: <.01 FAI: 0.993													
Comment: Trapezoidal flume with throat recorder and spillway for flows over 1.42m. Measures up to the 1 in 10 year flood (approx. 1.69m) above which bypassing occurs. Drowning minimal. Naturalised flows from 1963 to 1976. Minimal adjustments needed. # Rural, upland (for East Anglia) catchment at head of R. Chelmer. Upper quarter of catchment is Chalk, remainder is London Clay, both overlain by Boulder Clay. Responsive.		1996	438	74	65	42	0.15	4.9	12/02	**0.01**	**01/08**	0.3	0.08	0.04
		1997	511	86	*48*	31	0.11					0.2	0.07	0.03
		1998	711	120	171	111	0.39	14.1	16/04	0.03	13/08	1.0	0.15	0.05
		1999	660	112	159	103	0.37	10.7	28/01	0.05	02/08	0.9	0.17	0.06
		2000	848	143	293	190	0.67	*23.0*	*30/10*	0.06	17/08	1.7	0.28	0.07
037020	**Chelmer at Felsted** C.A: 132.1 km^2	**70..95**	**587**		**160**		**0.67**	**20.5**	**29/01 1988**	**0.06**	**10/07 1976**	**1.3**	**0.33**	**0.16**
M.A: EA	Local No: Sens.: 18.1 B/full: 12.0m^3s^{-1}													
F.A.R: EI	Level: 40m UE: .01 FAI: 0.970													
Comment: 'Essex' profile (modified Flat V Crump) weir with crest tapping measuring up to 1.21m - limit of reliable gauging, higher flows estimated. Flood plain storage starts at 1.1m. Drowning commences at 0.6m, and varies in severity. Naturalised flows 1970-1976. Minimal abstractions, adjustments needed for STW and industrial effluent discharges. # Rural, agricultural catchment. Boulder Clay and glacial gravel covering Chalk in extreme N, London Clay elsewhere.		1996	430	73	81	51	0.34	7.9	25/02	0.11	22/07	0.5	0.25	0.13
		1997	518	88										
		1998	698	119	168	105	0.70	11.3d	16/04	0.12	12/08	1.6	0.33	0.15
		1999	646	110	167	104	0.70	14.9d	28/01	0.15	02/08	1.4	0.39	0.19
		2000	828	141	*298*	186	1.25					3.2	0.55	0.21
037008	**Chelmer at Springfield** C.A: 190.3 km^2	**65..95**	**589**		**173**		**1.05**	**27.2**	**10/12 1982**	**0.13**	**27/08 1976**	**2.0**	**0.59**	**0.28**
M.A: EA	Local No: Sens.: 28.1 B/full: 6.0m^3s^{-1}													
F.A.R: PGI	Level: 23m UE: .02 FAI: 0.976													
Comment: Big trapezoidal flume with d/s level recorder. Occasional weedgrowth problems. Spillway flow commences at 17.0 m^3s^{-1} (1.75m), flows above this are estimated. Bypassed on the lb at very high flows. Naturalised flows for period 1959 to 1976. Provides flood warning for Colchester. # Rural catchment, gauging station in northern suburb of Chelmsford. Boulder Clay over London Clay, all underlain by Upper Chalk.		1996	422	72	100	58	0.60	6.5	25/02	0.26	22/07	0.9	0.52	0.29
		1997	513	87	74	43	0.45	3.8	19/12	0.20	22/08	0.7	0.38	0.23
		1998	686	116	171	99	1.03	15.5	16/04	0.24	13/08	2.3	0.60	0.28
		1999	628	107	167	97	1.01	15.1	29/01	0.27	03/08	1.9	0.64	0.33
		2000	808	137	286	165	1.72	*38.2*	*30/10*	0.31?	24/08	4.1	0.84	0.34
037007	**Wid at Writtle** C.A: 136.3 km^2	**64..95**	**609**		**198**		**0.85**	**37.1**	**21/11 1974**	**0.05**	**26/08 1976**	**2.0**	**0.37**	**0.12**
M.A: EA	Local No: Sens.: 19.5 B/full: 25.0m^3s^{-1}													
F.A.R: EI	Level: 27m UE: .05 FAI: 0.996													
Comment: 'Essex' profile (modified Flat V Crump) weir. Rated spillway starts at 1.25m. Full range, modular station. Weir began to subside in 1991. Flow during summer months consists predominantly of STW discharge, of which approximately 0.08 m^3s^{-1} is derived from outside the catchment, adjustments needed for this. Flows naturalised from 1964 to 1976. Responsive regime. # Low-lying, rural catchment on London Clay with scattered areas of Boulder Clay above.		1996	425	70	136	69	0.59	14.1	29/01	0.13	17/07	0.9	0.24	0.16
		1997	527	87	90	45	0.39	7.7	19/12	0.14	30/07	0.7	0.25	0.16
		1998	700	115	234	118	1.01	16.7	01/11	0.16	28/07	2.7	0.45	0.18
		1999	595	98	173	87	0.75	8.7	25/12	0.16	18/07	1.9	0.38	0.18
		2000	787	129	322	163	1.39	24.7	30/10	0.17	15/08	3.7	0.61	0.18
037006	**Can at Beach's Mill** C.A: 228.4 km^2	**62..95**	**592**		**172**		**1.25**	**35.9**	**12/11 1987**	**0.06**	**26/08 1976**	**2.8**	**0.56**	**0.19**
M.A: EA	Local No: Sens.: 8.1 B/full: 28.0m^3s^{-1}													
F.A.R: EI	Level: 23m UE: .03 FAI: 0.993													
Comment: Triple throated compound flume (built within mill race). Trapezoidal centre section for low flows. Limit of station - 35 m^3s^{-1}. Spillway flow starts at 2.0m - very significant part of flow, allowance for this not made in record. Naturalised flows from 1962 to 1976. Adjustments needed for industrial and sewage effluent. # Rural, agricultural catchment just W of Chelmsford, 350m d/s of confluence with R. Wid. London Clay overlain with Boulder Clay in N, exposed in S.		1996	414	70	67	39	0.49	13.1	25/02	0.15	19/07	0.8	0.35	0.17
		1997	514	87	*66*	38	0.48	12.4	19/12	0.16	30/07	0.8	0.31	0.19
		1998	686	116	203	118	1.47	22.0	15/04	0.20	26/07	4.0	0.60	0.23
		1999	596	101	156	91	1.13	16.2	24/12	0.20	29/07	2.9	0.55	0.24
		2000	790	133	298	173	2.15	*37.0*	*30/10*	0.23	25/08	5.5	0.94	0.27
037013	**Sandon Brook at Sandon Bridge** C.A: 75.1 km^2	**63..95**	*568*		**124**		**0.30**	**15.7**	**29/01 1988**	**0.01**	**16/09 1990**	**0.6**	**0.10**	**0.03**
M.A: EA	Local No: Sens.: 32.6 B/full: 15.0m^3s^{-1}													
F.A.R: SRE	Level: 20m UE: .02 FAI: 0.852													
Comment: 'Essex' profile (modified Flat V Crump) weir with crest tapping. Insensitive. Modular limit approx 0.6m. Subject to weed growth and accretion. CA includes 13.7 sq.km draining to Hanningfield Reservoir 10km u/s. Naturalised flows (1963-1976) account for reservoir compensation water (0.011 m^3s^{-1}) and storm overflows. Minor additions from industrial effluent. # Rural catchment. Tributary of R. Chelmer. Glacial sand and gravel form high ground in NE over London Clay. Patches of Boulder Clay in S.		1996	423	74	44	35	0.10	3.2	25/02	0.01	23/07	0.2	0.07	0.03
		1997	521	92	*39*	31	0.09	3.1	19/12	0.02	20/10	0.2	0.05	0.03
		1998	669	118	130	105	0.31	8.2	01/11	0.04	05/07	0.9	0.11	0.04
		1999	576	101	106	85	0.25	5.4	24/12	0.04	20/10	0.7	0.10	0.05
		2000	778	137	227	183	0.54	14.4	28/05	0.05	19/06	1.5	0.18	0.06
037002	**Chelmer at Rushes Lock** C.A: 533.9 km^2	**32..95**	**590**		**111**		**1.88**	**20.0**	**07/03 1995**	**>0.00**	**02/07 1994**	**4.8**	**0.83**	**0.12**
M.A: EA	Local No: Sens.: 35.3 B/full: 13.0m^3s^{-1}													
F.A.R: PGEI	Level: 11m UE: FAI:													
Comment: Sharp-crested, shallow V profile weir (insensitive), replaced broad-crested timber weir in 1972. Complex hydrometric history. Weir provides head for lock (navigable river), discharge through lock not measured. Weir repaired in 1982 because of serious leakage. No accurate measure of low or high flow, upper limit is 0.7m (19.99 m^3s^{-1}). Bypassing begins at 0.57m. Flows naturalised from 1932 to 1976. # Rural catchment apart from Chelmsford, Brentwood and Billericay. London Clay overlain by semi-pervious Boulder Clay.		1996	419	71	49	44	0.83	*14.5*	*25/02*	0.10	21/07	1.6	0.56	0.17
		1997	513	87	42	38	0.70	12.1	19/12	0.10	02/10	1.3	0.48	0.18
		1998	683	116	134	121	2.27	19.5	17/04	0.26	25/05	5.8	0.99	0.38
		1999	604	102	119	107	2.01	19.0	29/01	0.37	26/07	4.5	1.14	0.49
		2000	791	134	224	202	3.77	*20.0*	*30/10*	0.46	26/08	10.4	1.73	0.56
037003	**Ter at Crabbs Bridge** C.A: 77.8 km^2	**32..95**	**581**		**106**		**0.26**	**10.1**	**22/11 1974**	**>0.00**	**05/08 1976**	**0.5**	**0.13**	**0.03**
M.A: EA	Local No: Sens.: 28.3 B/full: 8.0m^3s^{-1}													
F.A.R: PI	Level: 15m UE: <.01 FAI: 0.977													
Comment: Trapezoidal flume with throat tapping, replaced less accurate station - Hatfield Peverel, 900m d/s, in 1964. Theoretically rated. Modular limit 0.95m, no level yet recorded above 1.6m (structurefull). Hatfield Peverel record held with this station - 1932 to 1964. Naturalised flows - 1964 to 1976. Minor surface water abstractions for spray irrigation, small discharges from STW but net export through PWS. # Rural, agricultural catchment on London Clay overlain by Boulder Clay.		1996	394	68	43	41	0.10	1.7	25/02	0.01	01/07	0.2	0.07	0.03
		1997	513	88	33	31	0.08	2.1	19/12	0.02	29/05	0.1	0.07	0.03
		1998	650	112	118	111	0.29	5.3	01/08	0.03	29/08	0.6	0.15	0.05
		1999	585	101	112	106	0.28	5.2	29/01	0.04	03/08	0.5	0.13	0.05
		2000	752	129	240	226	0.59	9.4	30/10	0.05	23/08	1.6	0.24	0.07
037031	**Crouch at Wickford** C.A: 71.8 km^2	**76..95**	**600**		**151**		**0.34**	**24.6**	**09/12 1982**	**0.02**	**02/06 1987**	**0.7**	**0.15**	**0.05**
M.A: EA	Local No: 37031 Sens.: 27.5 B/full: 40.0m^3s^{-1}													
F.A.R: E	Level: m UE: .14 FAI: 0.975													
Comment: Crump weir, very small fall because approaching tidal limit. Rated channel for high flows calibrated by c/m and float measurements. Low modular limit. Pre- 24/1/69 add 0.107m to recorded head. Significant urban runoff from Billericay and Basildon. Low flows heavily influenced by STW discharge. # Low lying, undulating terrain supporting agriculture. Catchment includes Billericay and Basildon. London Clay overlain by alluvium. Responsive catchment.		1996	438	73	80	53	0.18	4.3	25/02	0.04	18/08	0.4	0.09	0.05
		1997	507	85	89	59	0.20	6.6	19/12	0.04	02/06	0.4	0.10	0.05
		1998	682	114	173	115	0.39	18.3	31/10	0.05	09/08	1.0	0.15	0.06
		1999	567	95	124	82	0.28	5.4	18/04	0.05	20/10	0.7	0.13	0.06
		2000	787	131	243	161	0.55	*30.0*	*28/05*	0.03	13/09	1.4	0.21	0.04

				Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
037033	**Eastwood Brook at Eastwood**	C.A: 10.4 km^2		**75..95**	**564**		**152**		**0.05**	**10.1**	**02/10**	**0.00**	**08/08**	**0.1**	**0.02**	**0.01**
											1992		**1990**			
M.A: EA	Local No:	Sens.: 50.6	B/full: 20.0m^3s^{-1}													
F.A.R: E	Level: 12m	UE: .30	FAI: 1.000													
Comment: Non-standard weir, insensitive at low flows, however, a good stepped fall, so no drowning. Full range station. Very flashy, composed almost entirely of urban runoff. # Small, totally urbanised catchment on an industrial estate on the outskirts of Southend. Underlying geology is London Clay.				1996	416	74	555	365	0.18	4.3	25/02	0.04	18/08	0.4	0.09	0.05
				1997	474	84	105	69	0.03	4.5	24/02	>0.00	22/07	0.1	0.01	0.01
				1998	663	118	155	102	0.05			0.01	07/08	0.1	0.02	0.01
				1999	524	93	124	82	0.04			>0.00	28/05	0.1	0.02	0.01
				2000	771	137	218	143	0.07			0.01?	13/08	0.2	0.03	0.01

Map 7: THAMES



Area: 12,917 km^2

Average Rainfall (1961–90): 688 mm

Gauging Station Register

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
037014	Roding	High Ongar	TL 561040	95.1	EW	1963–00	606	157	449	371	00	23	97	0.47	>0.00	07/76	11.2	.35	1.1	0.02
037015	Cripsey Brk	Chipping Ongar	TL 548035	62.2	FV	1961..00	627	181	446	501	00	36	73	0.36	0.02	10/72		.30	0.9	0.03
037023	Roding	Loughton	TQ 442955	269.0	C	1971..00	601	166	435	398	00	37	97	1.42	0.08	08/76		.34	3.2	0.09
037001	Roding	Redbridge	TQ 415884	303.3	EW	1950–00	620	190	430	352	00	55	97	1.83	0.17	08/95	23.0	.39	4.4	0.23
037019	Beam	Bretons Farm	TQ 515853	49.7	EW	1965..00	602	206	396	278	87	107	73	0.32	0.04	08/76	9.2	.38	0.7	0.07
037018	Ingrebourne	Gaynes Park	TQ 553862	47.9	EW	1970–00	600	215	385	307	00	114	73	0.33	0.07	08/76	4.6	.49	0.7	0.09
038013	Upper Lee	Luton Hoo	TL 118185	70.7	TP B	1960–00	665	96	569	170	67	8	97	0.22	0.00	11/97	3.0	.62	0.5	
038018	Upper Lee	Water Hall	TL 299099	150.0	C	1971–00	662	264	398	358	93	128	73	1.25	0.29	08/76	7.9	.82	2.1	0.49
038017	Mimram	Whitwell	TL 184212	39.1	C	1970–00	658	66	592	142	94	6	97	0.08	0.00	11/97		.97	0.1	0.01
038011	Mimram	Fulling Mill	TL 225169	98.7	C	1957..00	678	64	614	111	79	12	73	0.20	0.00	02/98	0.4	.96	0.4	0.02
038003	Mimram	Panshanger Park	TL 282133	133.9	FL	1952..00	653	123	530	199	94	54	73	0.52	0.14	08/76	2.0	.93	0.8	0.22
038012	Stevenage Brk	Bragbury Park	TL 274211	36.0	FV	1974–00	640	83	557	120	79	56	76	0.09	0.01	08/76		.27	0.2	0.01
038030	Beane	Hartham	TL 325131	175.1	FV	1979–00	640	101	539	148	88	39	97	0.56	0.14	09/97		.76	0.9	0.19
038029	Quin	Griggs Bridge	TL 392248	50.4	FV	1978–00	636	91	545	163	79	8	97	0.14	>0.00	11/97		.42	0.3	0.01
038004	Rib	Wadesmill	TL 360174	136.5	FL + C	1979–00	631	110	521	181	00	15	97	0.48	0.02	09/97	12.2	.58	0.9	0.07
038006 *	Rib	Herts Train'g Sch	TL 335158	148.1	TP	1956..82	632	133	499	207	58	41	73	0.63	0.05	08/76		.58	1.2	0.13
038002	Ash	Mardock	TL 393148	78.7	FV	1980–00	633	113	520	214	00	19	97	0.28	0.02	09/97	6.8	.52	0.6	0.04
038005 *	Ash	Easneye	TL 380138	85.2	TP	1960..81	628	119	509	161	74	31	73	0.32	0.02	08/76		.55	0.6	0.06
038016	Stansted Sp	Mountfitchet	TL 500246	20.5	TP	1969–00	631	88	543	149	75	5	97	0.06	0.00	12/97		.98	0.1	>0.00
038028	Stansted Brk	Gypsy Lane	TL 506241	25.9	FV	1972..00	632	90	542	192	00	26	73	0.07	0.01	08/97		.45	0.2	0.01
038026	Pincey Brook	Sheering Hall	TL 495126	54.6	FV	1974–00	623	176	447	395	00	43	97	0.31	0.01	08/76	11.0	.39	0.7	0.03
038007	Canons Brk	Elizabeth Way	TL 431104	21.4	FL	1953–00	616	264	352	429	00	137	73	0.18	0.03	05/54	7.8	.41	0.4	0.04
038027	Stort	Glen Faba	TL 393093	280.2	US	1985..00	624	150	474	322	00	50	97	1.34	0.16	08/95		.44	2.9	0.16
038031	Lee	Rye Bridge	TL 385098	758.3	US	1993–00	663	126	537	200	00	32	97	3.03	0.32	10/96		.68	6.3	0.44
038001	Lee	Feildes Weir	TL 390092	1036.0	MIS	79..00n	641	162	479	350	19	49	34	5.32	0.80	08/49	39.1	.57	9.4	1.59
038020	Cobbins Brk	Sewardstone Rd	TQ 387999	38.4	FL	1971..00	614	177	437	383	00	48	73	0.22	>0.00	08/76	8.3	.26	0.5	0.01
038024	Small R. Lee	Ordnance Road	TQ 370988	41.5	FV	1973–00	638	234	404	365	00	94	97	0.31	0.05	08/76		.47	0.6	0.07
038021	Turkey Brook	Albany Park	TQ 359985	42.2	FV	1971–00	669	150	519	302	00	43	73	0.20	>0.00	08/95	7.6	.22	0.5	0.01
038019 *	Salmon Brk	Montague Road	TQ 354932	33.9	FL	1971..76	588	132	456	163	72	87	73	0.14	0.03	03/73		.31	0.3	0.02
038014	Salmon Brk	Edmonton	TQ 343937	20.5	FV	1956..00	668	248	420	491	00	117	73	0.16	0.01	09/59		.29	0.4	0.01
038025 *	Pymmes Brk	Alcazar	TQ 340925	41.4	VA	1954..74	675	401	274	681	60	231	69	0.53	0.09	10/69		.54	1.1	0.11
038015 *	Intercept' Dr	Enfield	TQ 355932	7.4	FL	1969–82	615	465	150	626	79	366	71	0.11	0.04	02/71		.50	0.2	0.04
038022	Pymmes Brk	Edmonton	TQ 340925	42.6	C	1954–00	679	361	318	663	60	168	73	0.49	0.09	10/69	22.9	.49	1.0	0.11
038032	Lee	Lea Bridge	TQ 352872	1364.0	US	1994..00	600	128	472	147	95	121	97	5.54	3.26	07/96		.76	8.7	3.03
039100 *	Swill Brook	Oaksey	ST 997927	53.3	EM	1984..98	777	183	594	243	94	125	90	0.31	0.00	09/91		.46	0.9	
039040	Thames	Cricklade	SU 094942	185.0	CC	1972–00	797	249	548	425	00	84	73	1.46	0.03	08/76	8.1	.68	4.1	0.07
039108	Churn	Perrott's Brook	SP 022057	59.0	FV	1990..00	912	337	575	457	99	153	97	0.63	0.01	09/95		.95	1.5	0.05
039073	Churn	Cirencester	SP 020028	84.0	FV	1979–00	898	290	608	462	00	124	97	0.77	>0.00	10/95		.89	1.9	0.05
039035	Churn	Cerney Wick	SU 076963	124.3	CC	1969–00	861	222	639	414	00	40	76	0.87	0.00	09/76	3.5	.83	2.2	0.01
039087	Ray	Water Eaton	SU 121935	84.1	US	1974..00	725	491	234	703	00	297	76	1.31	0.33	08/76		.58	2.5	0.44
039099	Ampney Brk	Ampney St Peter	SP 076013	45.3	FV	1983–00	825	400	425	678	00	242	97	0.57	0.00	10/96		.76	1.4	
039074	Ampney Brk	Sheepen Bridge	SU 105950	74.4	FV	1980..00	798	329	469	599	00	178	90	0.78	0.00	10/96		.74	2.0	
039109	Coln	Fossebridge	SP 080112	82.0	C	1990..00	889	179	710	244	94	58	97	0.47	0.03	08/95		.92	1.1	0.03
039020	Coln	Bibury	SP 122062	106.7	C	1963–00	822	398	424	645	00	118	76	1.35	0.20	09/76	3.6	.93	2.6	0.40
039110	Coln	Fairford	SP 151012	130.0	EM	1991..00	874	491	383	605	99	293	97	2.02	0.53	10/96		.95	3.8	0.63
039090	Cole	Inglesham	SU 208970	140.0	CC	1976..00	702	268	434	372	98	98	97	1.19	0.11	08/95	10.8	.54	2.7	0.14
039042	Leach	Lechlade	SU 227994	76.9	C	1972..00	737	310	427	458	77	139	76	0.76	0.02	09/90	3.5	.79	1.8	0.07
039097 *	Thames	Buscot	SU 230981	997.0	MIS	1980..98	757	290	467	367	82	204	96	9.17	0.83	08/95		.70	21.4	1.25
039142	Windrush	Bourton on Wtr	SP 160209	65.5	C	1995–00	870	350	520	512	00	225	97	0.73	0.31	08/97		.95	1.2	0.33
039143	Dikler	Bourton on Wtr	SP 180196	90.7	C	1995–00	827	335	492	529	00	205	97	0.96	0.19	09/96		.82	2.1	0.22
039076	Windrush	Worsham	SP 299107	296.0	MIS	1942..00	781	260	521	437	00	166	97	2.44	0.36	08/44		.80	5.3	0.63
039006	Windrush	Newbridge	SP 402019	362.6	CB	1950–00	765	285	480	446	60	105	76	3.28	0.19	08/76	11.2	.87	6.6	0.72
039129	Thames	Farmoor	SP 438068	1608.6	US	1992..00	804	306	498	473	00	132	97	15.63	0.62	08/95		.68	42.0	0.76
039008	Thames	Eynsham	SP 445087	1616.2	MIS	1951..00n	749	289	460	720	00	121	76	14.83	0.59	08/76	66.9	.68	32.9	1.97
039034	Evenlode	Cassington Mill	SP 448099	430.0	CC	1970–00	721	274	447	419	00	117	76	3.73	0.15	08/76	20.8	.71	8.6	0.62
039026	Cherwell	Banbury	SP 458411	199.4	CC	1966..00	690	170	520	318	00	41	76	1.07	>0.00	07/76	16.7	.39	2.8	0.02
039144	Sor	Bodicote	SP 462369	87.7	C	1995–00	678	232	446	352	00	101	97	0.64	0.12	09/96		.74	1.4	0.13
039051 *	Sor Brook	Adderbury	SP 475346	106.4	C	1967..88	673	251	422	336	79	86	76	0.85	0.03	08/76		.74	1.7	0.18
039021	Cherwell	Enslow Mill	SP 482183	551.7	CC	1965–00	690	219	471	322	00	78	76	3.84	0.13	08/76	25.9	.65	9.1	0.64
039017	Ray	Grendon	SP 680211	18.8	FL	1962..00	644	164	480	319	00	29	73	0.10	0.00	09/97	5.5	.17	0.2	
039140	Ray	Islip	SP 523137	290.1	US	1996..00	674	198	476	215	99	88	97	1.83	0.20	10/96		.57	3.1	0.18
039139	Cherwell	Oxford	SP 521061	906.8	US	1996..00	666	180	486	108	97	108	97	5.18	1.11	08/97		.63	7.2	0.91
039112	Letcombe Brk	Arabellas Lake	SU 374852	3.1	FV	1992..00	796	326	470	590	00	81	97	0.03	0.00	12/96		.93	0.1	
039061	Letcombe Brk	Letcombe Bass.	SU 375853	4.0	FV	1971..00	747	670	77	962	94	55	76	0.09	>0.00	08/76		.96	0.2	0.01
039113	Manor Frm Brk	Letcombe Regis	SU 383861	1.4	FV	1992..00	775	293	482	428	93	45	97	0.01	>0.00	10/97		.68	0.0	>0.00
039081	Ock	Abingdon	SU 481966	234.0	CC	1962..00	658	206	452	350	00	76	76	1.53	0.13	08/76	11.9	.63	3.5	0.32
039046	Thames	S'ton Courtenay	SU 516946	3414.0	US	1973..00n	712	273	439	316	79	125	97	29.54	2.41	09/90		.64	66.9	3.34
039002	Thames	Days Weir	SU 568935	3444.7	MIS	1938..00n	717	292	425	470	60	94	73	31.93	0.39	08/76	142.2	.65	67.9	3.33
039147	Wendover Sp	Wendover	SP 869083	9.5	TP	1989–00	766	209	557	339	94	120	97	0.06	0.02	11/90		.96	0.1	0.03
039038 *	Thame	Shabbington	SP 670055	443.0	B	1968..94	647	195	452	267	79	62	73	2.74	0.16	08/76	24.4	.54	6.0	0.43
039105	Thame	Wheatley	SP 612050	533.8	US	1989..00	654	230	424	373	00	88	97	3.89	0.73	09/90		.60	10.3	0.87
039065	Ewelme Brk	Ewelme	SU 642916	13.4	FV	1970..00	706	104	602	160	93	12	97	0.04	0.00	11/97		.98	0.1	0.01
039146	Mill Brook	Blewbury	SU 531864	2.0	FV	1996–00	697	1514		2334	00	315	97	0.10	0.01	07/97		.95	0.2	0.01
039114	Pang	Frilsham	SU 537730	89.8	FV	1991–00	760	66	694	127	00	1	97	0.19	0.00	12/97		.95	0.5	
039115	Pang	Bucklebury	SU 556711	109.0	FV	1991..00	749	57	692	102	94	9	92	0.20	>0.00	08/92		.87	0.6	
039027	Pang	Pangbourne	SU 634766	170.9	C	1968–00	707	116	591	227	00	49	91	0.63	0.11	08/76	2.1	.86	1.1	0.19
039116	Sulham Brook	Sulham	SU 642741	3.0	FV	1991..00	673	725		1514	00	158	97	0.07	>0.00	08/97		.63	0.2	>0.00
039130	Thames	Reading	SU 718741	4633.7	US	1992–00	744	265	479	403	00	111	97	38.90	4.11	08/95		.68	101.3	5.07
039037	Kennet	Marlborough	SU 187686	142.0	C	1972–00	823	192	631	388	00	12	76	0.86	>0.00	10/76	3.1	.94	2.1	0.06

Station number		River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
039077		Og	Marlborough	SU 194697	59.2	FV	1980–00	816	169	647	**341**	**00**	**14**	**97**	0.32	>0.00	12/90		.95	0.7	0.01
039101		Aldbourne	Ramsbury	SU 288717	53.1	FV	1982..00	807	123	684	196	94	**14**	**97**	0.21	**0.01**	**10/97**		.97	0.5	0.02
039043		Kennet	Knighton	SU 295710	295.0	CC	1962..00	802	269	533	**486**	**00**	51	76	2.52	0.16	08/76		.95	5.2	0.59
039028		Dun	Hungerford	SU 321685	101.3	C	1968–00	790	224	566	**286**	**00**	106	76	0.72	0.20	08/76	2.4	.95	1.3	0.27
039103		Kennet	Newbury	SU 472672	548.1	US	1989..00	822	275	547	446	00	132	97	4.78	1.59	10/97		.94	9.2	1.79
039032	*	Lambourn	East Shefford	SU 390745	154.0	CC	1966–83	758	157	601	225	69	17	76	0.77	0.01	07/76	1.8	.98	1.6	0.10
039031	*	Lambourn	Welford	SU 411731	176.0	CC	1962–83	762	183	579	249	67	62	76	1.02	0.23	08/76	2.0	.98	1.7	0.41
039033		Winterbourne	Bagnor	SU 453694	49.2	C	1962–00	730	106	624	185	82	38	65	0.17	0.02	11/69	0.3	.96	0.3	0.05
039019		Lambourn	Shaw	SU 470682	234.1	C	1962–00	745	231	514	**345**	**00**	100	76	1.71	0.49	08/76	3.5	.97	2.8	0.75
039025		Enborne	Brimpton	SU 568648	147.6	CC	1967..00	814	282	532	**426**	**99**	140	73	1.32	0.04	08/76	15.6	.53	2.8	0.17
039016		Kennet	Theale	SU 649708	1033.4	C	1961–00	782	295	487	**462**	**00**	124	76	9.67	1.36	08/76	37.3	.87	16.9	3.76
039022		Loddon	Sheepbridge	SU 720652	164.5	C	1965..00	755	422	333	**554**	**00**	231	73	2.20	0.59	08/76	16.4	.76	3.8	0.95
039123		Blackwater	Farnborough	SU 879559	35.5	EM	1996–00	789	414	375	616	00	297	97	0.47	0.12	05/98		.80	0.9	0.13
039015		Whitewater	Lodge Farm	SU 731523	44.6	C	1927–00	795	**252**	**543**	**426**	**00**	116	34	0.36	0.12	10/34	1.2	.94	0.6	0.17
039044		Hart	Bramshill House	SU 755593	84.0	C	1972..00	712	283	429	**434**	**00**	131	73	0.75	0.12	08/76	8.5	.64	1.5	0.22
039007		Blackwater	Swallowfield	SU 731648	354.8	CC	1952–00	715	268	447	**458**	**00**	130	53	3.02	0.64	09/59	21.1	.67	5.6	0.96
039138		Loddon	Twyford	SU 778768	751.8	US	1995..00	750	281	469	435	00	176	97	6.70	2.26	09/96		.80	14.1	2.62
039039		Wye	High Wycombe	SU 853936	67.7	TP	1997..00	868	106	762	152	99	66	98	0.23	0.00	10/97		.92	0.6	0.08
039023		Wye	Hedsor	SU 896867	137.3	C	1964–00	772	227	545	314	67	102	76	0.99	0.31	08/76	2.9	.93	1.5	0.46
039009	*	Thames	Bray Weir	SU 909797	6915.3	MIS	1959–82	721	264	457	363	77	128	73	57.93	8.37	08/76		.70	126.3	15.72
039052		The Cut	Binfield	SU 853713	50.2	MIS	1957..00	680	241	439	**441**	**00**	123	73	0.38	0.03	09/64	8.3	.46	0.8	0.06
039072		Thames	Windsor Park	SU 982773	7046.0	US	1979..00	722	254	468	**414**	**00**	**127**	**97**	56.73	13.23	08/95		.72	124.4	15.21
039125		Ver	Redbourn	TL 109118	62.6	FV	1993..00	753	37	716	111	94	<1	97	0.07	0.00	08/98		.93	0.3	
039126		Red	Redbourn	TL 107119	18.5	FV	1993..00	730	66	664	114	94	17	97	0.04	0.00	05/97		.67	0.1	
039014		Ver	Hansteads	TL 151016	132.0	CC	1956–00	716	97	619	195	94	23	76	0.41	0.02	08/76	1.6	.87	0.8	0.08
039013		Colne	Berrygrove	TQ 123982	352.2	CC	1934..00	696	71	625	209	37	9	73	0.79	0.01	11/73		.67	1.6	0.13
039089		Gade	Bury Mill	TL 053077	48.2	FL	1975..00	743	99	644	177	88	**22**	**97**	0.15	0.01	08/76	0.7	.92	0.3	0.02
039030		Gade	Croxley Green	TQ 082952	184.0	CC	1970–00	722	162	560	249	88	56	73	0.94	0.09	08/76		.87	1.6	0.34
039088		Chess	Rickmansworth	TQ 066947	105.0	C	1974–00	771	175	596	255	83	61	76	0.58	0.09	08/76	1.3	.95	1.0	0.22
039010		Colne	Denham	TQ 052864	743.0	B	1952..00	721	171	550	248	94	68	73	4.02	0.93	08/76	10.5	.87	6.4	1.81
039127		Misbourne	Little Missenden	SU 934984	47.2	TPC	1993..00	817	77	740	134	94	6	97	0.12	0.00	09/97		.96	0.3	0.02
039091	*	Misbourne	Quarrendon Mill	SU 975963	66.3	B	1978..85	799	59	740	119	83	34	84	0.12	0.02	09/80		.83	0.3	0.02
039102		Misbourne	Denham Lodge	TQ 046866	136.0	C	1984..00	765	55	710	99	88	**13**	**97**	0.24	**0.03**	**09/97**		.89	0.4	0.06
039098		Pinn	Uxbridge	TQ 062826	33.3	EM	1984..00	670	181	489	**418**	**98**	**87**	**97**	0.19	0.01	08/95		.19	0.5	0.01
039117		Colne Brook	Hythe End	TQ 019723	929.5	EM	1991..00	738	60	678	77	95	24	97	1.76	0.36	10/96		.87	3.7	0.43
039124		Wraysbury	Staines	TQ 033718	55.7	C	1995..00	663	225	438	516	00	87	97	0.40	0.13	01/97		.73	0.8	0.12
039111		Thames	Staines	TQ 034713	8120.0	US	1990..00	724	208	516	352	00	81	97	53.65	10.00	07/97		.68	138.1	10.43
039128		Bourne (South)	Addlestone	TQ 061650	90.1	VA	1992..00	712	305	407	488	00	210	97	0.87	0.28	08/95		.75	1.3	0.33
039118		Wey	Alton	SU 717394	44.6	FV	1991–00	918	48	870	109	00	4	97	0.07	0.00	09/97		.91	0.2	
039119		Wey	Kings Pond	SU 724395	45.9	TP	1991..00	918	66	852	135	00	14	92	0.10	0.00	10/97		.90	0.2	
039120		Caker Stream	Alton	SU 729388	88.1	FV	1991..00	986	27	959	66	00	10	97	0.08	0.00	10/97		.40	0.2	
039078		Wey(north)	Farnham	SU 838462	191.1	MIS	1978..00	892	123	769	**232**	**00**	**68**	**97**	0.74	**0.15**	**09/97**		.73	1.4	0.18
039011		Wey	Tilford	SU 874433	396.3	C	1954–00	863	256	607	419	60	135	73	3.22	0.88	08/55	24.5	.72	5.4	1.28
039122		Cranleigh Wtrs	Bramley	SU 999462	109.5	US	1990..00	816	316	500	624	00	211	97	1.10	0.18	08/98		.40	2.8	0.19
039036		Law Brook	Albury	TQ 045468	16.0	TP	1968..00	824	207	617	266	69	136	92	0.10	**0.05**	**06/96**	0.5	.93	0.1	0.07
039029		Tillingbourne	Shalford	TQ 000478	59.0	C	1968–00	810	283	527	367	69	189	92	0.53	0.26	06/92	2.0	.89	0.7	0.31
039141		Wey	Guildford	SU 994495	689.6	US	1996..00	910	254	656	416	00	161	97	5.56	1.89	09/97		.69	8.8	1.84
039079		Wey	Weybridge	TQ 068648	1008.0	US	1979..00	803	207	596	243	94	**129**	**97**	6.61	2.02	08/90		.67	12.4	2.17
039121		Thames	Walton	TQ 099670	9291.5	US	1991..00	748	194	554	325	00	71	97	57.12	9.16	10/95		.67	127.2	9.52
039054		Mole	Gatwick Airport	TQ 260399	31.8	FLC	1961..00	822	332	490	605	66	127	73	0.34	0.00	08/95		.24	0.9	0.02
039024	*	Gatwick St	Gatwick	TQ 288402	31.1	VA	1952–77	897	460	437	768	60	281	53	0.45	0.03	06/76	6.2	.56	0.9	0.11
039086		Gatwick St	Gatwick Link	TQ 285417	33.6	C	1975–00	843	665	178	**1123**	**00**	481	76	0.71	0.13	08/76	10.8	.61	1.4	0.26
039053		Mole	Horley	TQ 271434	89.9	CBVA	1961..00	818	474	344	652	94	233	73	1.35	0.18	08/76	24.3	.45	2.7	0.25
039069		Mole	Kinnersley Mnr	TQ 262462	142.0	MIS	1972..00	808	486	322	**970**	**00**	211	73	2.19	0.17	08/76	45.5	.40	4.6	0.32
039068		Mole	Castle Mill	TQ 179502	316.0	C	1971..00	785	371	414	**683**	**00**	159	73	3.72	0.67	08/72		.42	8.7	0.79
039106		Mole	Leatherhead	TQ 161564	371.4	EM	1986..00	800	289	511	320	98	234	97	3.40	0.90	08/95		.59	7.4	0.89
039104		Mole	Esher	TQ 130653	469.6	US	1984..00	775	364	411	542	00	258	91	5.41	0.74	08/98		.51	11.9	1.21
039107		Hogsmill	Ewell	TQ 216633	33.7	FLVA	1988..00	729	40	689	92	94	3	91	0.04	>0.00	03/92		.94	0.1	>0.00
039012		Hogsmill	Kingston	TQ 182688	69.1	B	1956..00	683	456	227	**772**	**00**	298	73	1.00	0.43	10/69	13.5	.74	1.5	0.53
039001		Thames	Kingston	TQ 177698	9948.0	US	83-00n	719	247	472	418	51	98	34	77.87	10.76	07/21	308.4	.64	172.4	18.71
039055	*	Yeading Brk	Yeading West	TQ 083846	17.6	FV	1979..94	655	231	424	525	85	134	83	0.13	0.01	08/83	4.4	.43	0.3	0.01
039145		Yeading Brk	W Avenue	TQ 111845	9.6		1995–00	667	177	490	285	00	111	96	0.05	0.01	02/98		.24	0.1	0.01
039057		Crane	Cranford Park	TQ 103778	61.7	FL	1978..00	648	256	392	**399**	**00**	**149**	**97**	0.50	0.12	09/85	14.0	.36	1.1	0.11
039094		Crane	Marsh Farm	TQ 154734	81.0	FL	1977–00	635	201	434	303	93	**82**	**97**	0.51	**0.05**	**02/98**		.33	1.2	0.02
039092		Dollis Brook	Hendon Lane Br	TQ 240895	25.1	FV	1979..00	705	279	426	**432**	**00**	**156**	**96**	0.22	**0.02**	**03/97**	7.4	.29	0.5	0.03
039084		Brent	Brent Cross	TQ 236880	36.4	TP	1989–00	678	305	373	**496**	**00**	**208**	**96**	0.35	0.09	05/90		.34	0.8	0.07
039049		Silk Stream	Colindeep Lane	TQ 217895	29.0	FV	1973..00	689	269	420	**422**	**00**	**165**	**97**	0.25	0.03	04/74	11.7	.33	0.6	0.04
039096		Wealdstone	Wembley	TQ 192862	21.8	FV	1979..00	676	208	468	**307**	**00**	**120**	**97**	0.14	0.02	08/95	12.0	.25	0.3	0.02
039093		Brent	Monks Park	TQ 202850	117.6	FL	1978..00	690	265	425	**408**	**00**	**178**	**97**	0.99	0.18	10/85	24.6	.24	2.3	0.14
039131		Brent	Greenford	TQ 149823	146.2	FV	1992–00	693	264	429	389	00	171	97	1.23	0.27	08/95		.32	2.8	0.21
039005		Beverley Brk	Wimbledon Com.	TQ 216717	43.5	FL	1935..00	640	401	239	**524**	**00**	211	62	0.55	0.16	06/62	13.2	.67	0.9	0.24
039004		Wandle	Beddington Park	TQ 296655	122.0	EM	1936..00	782	45	737	93	93	8	73	0.17	0.01	08/76	3.0	.77	0.3	0.01
039085	*	Wandle	Wandle Park	TQ 266703	176.1	FL	1936..60	713	285	428	431	37	220	57	1.59	0.94	11/56		.82	2.5	0.92
039003		Wandle	Connollys Mill	TQ 265705	176.1	FL	1962..00	741	312	429	**546**	**00**	145	73	1.74	0.56	02/65	10.3	.87	2.8	0.74
039134		Ravensbourne	Bromley S	TQ 406687	10.3	FV	1993..00	711	153	558	227	00	101	96	0.05	0.01	10/95		.39	0.1	0.01
039058		Pool	Winsford Road	TQ 371725	38.3	FL	1978..00	665	240	425	**310**	**00**	**185**	**96**	0.29	**0.09**	**11/99**	10.6	.57	0.5	0.11
039056		Ravensbourne	Catford Hill	TQ 372732	120.4	FL	1977..00	727	111	616	146	86	**77**	**97**	0.42	**0.13**	**09/97**	15.3	.56	0.8	0.13
039135		Quaggy	Chinbrook	TQ 410720	14.5	FL	1992–00	705	191	514	257	00	126	99	0.09	0.01	07/99		.53	0.2	0.02
039095		Quaggy	Manor Ho Gdns	TQ 394748	33.5	FL	1978..00	650	141	509	**215**	**00**	**90**	**96**	0.15	**0.03**	**09/97**	4.8	.48	0.3	0.03

Hydrometric Statistics

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
037014	**Roding at High Ongar** C.A: 95.1 km^2	**63..95**	**604**		**158**		**0.48**	**15.0**	**15/03 1964**	**0.00**	**11/07 1976**	**1.1**	**0.13**	**0.02**
M.A: EA	Local No: 5420 Sens.: 40.0 B/full: 9.5m^3s^{-1}													
F.A.R: GI	Level: 41m UE: <.01 FAI: 0.986													
Comment: 'Essex' (modified Flat V) weir in an 11m wide section. Model-based calibration. Overfall operates (>1.7m) into a bypass channel. Structure subject to drowning; computed flows assume modularity - c/m rating under development. Evidence of weir settlement discovered in 1991, flows corrected 1987-91. Naturalised flows: 1964-76; minimal net import. Responsive flow regime. Spray irrigation can substantially deplete low flows. # Generally low lying, largely impermeable (London Clay/glacial deposits), agricultural catchment.		1996	402	67	43	27	0.13	3.3	25/02	0.01	05/08	0.2	0.05	0.01
		1997	506	84	23	15	0.07	0.9	25/12	0.01	11/08	0.1	0.04	0.02
		1998	687	114	161	102	0.49	10.8	16/04	0.02	26/07	1.4	0.14	0.03
		1999	622	103	140	89	0.42	8.0	04/01	0.02	29/07	1.0	0.13	0.04
		2000	828	137	372	235	1.12	19.5	30/10	0.04	25/08	3.2	0.34	0.05
037015	**Cripsey Brook at Chipping Ongar** C.A: 62.2 km^2	**61..95**	**625**		**176**		**0.35**	**40.2**	**10/06 1993**	**0.00**	**01/11 1975**	**0.9**	**0.10**	**0.02**
M.A: EA	Local No: 5427 Sens.: 33.3 B/full: 25.0m^3s^{-1}													
F.A.R: SEI	Level: 42m UE: FAI:													
Comment: Flat V weir (5.6m broad) installed in 1981 - superseded a compound thin-plate weir of limited capacity, most early flows truncated at around 2.5 m^3s^{-1}. Modular calibration. Over-estimation of flows during periods of drowned flow (e.g. in autumn 2000). Responsive flow regime. Sewage effluent is an important component of low flows. Impact of abstraction also evident on hydrograph. # Predominately impermeable catchment (London Clay but with extensive areas of glacial deposits). A rural catchment, agriculture is the primary land use.		1996	421	67	76	43	0.15	8.7	09/01	0.03	06/08	0.3	0.07	0.04
		1997	526	84	55	31	0.11	2.5	25/12	0.02	27/11	0.2	0.06	0.03
		1998	698	112	215	122	0.42	15.4	15/04	0.02	20/08	1.2	0.12	0.03
		1999	649	104	180	102	0.35	10.5	24/12	0.03	03/11	0.9	0.12	0.04
		2000	873	140	503	286	0.99	77.1	29/10	0.04	07/09	2.2	0.29	0.04
037023	**Roding at Loughton** C.A: 269.0 km^2	**71..95**	**594**		**168**		**1.41**	**45.8**	**22/11 1974**	**0.02**	**09/09 1990**	**3.3**	**0.40**	**0.10**
M.A: EA	Local No: 5470 Sens.: 22.2 S/full: 35.0m^3s^{-1}													
F.A.R: SEI	Level: 18m UE: FAI:													
Comment: Crump weir (single crest), installed 1989. C/m calibration. Prior to 1983: 'Essex' weir, subject to drowning. No data from 1982-88. High flows under review. # Predominantly impermeable catchment (London Clay and glacial deposits). Main land use is agriculture with significant urban areas.		1996	413	70	60	36	0.51	18.6	09/01	0.07	18/07	0.9	0.25	0.09
		1997	510	86	37	22	0.32	5.4	25/12	0.07	11/08	0.6	0.18	0.08
		1998	700	118	195	117	1.67	25.8	16/04	0.06	22/08	4.1	0.44	0.10
		1999	622	105	147	89	1.26	24.3	25/12	0.07	18/07	2.7	0.45	0.13
		2000	839	141	397	239	3.38	54.6	30/10	0.11	16/08	10.6	0.96	0.14
037001	**Roding at Redbridge** C.A: 303.3 km^2	**50..95**	**621**		**193**		**1.85**	**62.4**	**22/11 1974**	**0.08**	**13/08 1990**	**4.5**	**0.78**	**0.24**
M.A: EA	Local No: 5480 Sens.: 13.8 B/full: 24.9m^3s^{-1}													
F.A.R: SEI	Level: 6m UE: .05 FAI: 0.985													
Comment: 'Essex' profile (modified Flat V Crump) weir superseded insensitive broad-crested weir in 1962. Calibration above 35 m^3s^{-1} is based upon model tests. Flows augmented by moderate net import of water (but diversion of Luxborough STW effluent, completed in 1987, reduced dmfs). Pattern of low flows influenced by abstractions. Naturalised flows 1951-75. # Low lying, mainly impervious (London Clay and superficial deposits) catchment. Land use: rural with significant urban development close to the gauging station.		1996	413	67	74	38	0.71	12.5	09/01	0.13	19/07	1.3	0.39	0.16
		1997	512	82	55	28	0.53	5.7	22/06	0.14	10/08	1.1	0.34	0.16
		1998	701	113	193	100	1.86	17.0	17/04	0.15	22/09	5.2	0.70	0.19
		1999	622	100	145	75	1.40	14.5	04/01	0.11	18/07	3.3	0.62	0.18
		2000	846	136	353	183	3.38	75.1	30/10	0.19	07/09	9.6	1.39	0.24
037019	**Beam at Bretons Farm** C.A: 49.7 km^2	**65..95**	**601**		**213**		**0.34**	**17.8**	**02/10 1993**	**0.03**	**22/08 1976**	**0.7**	**0.16**	**0.07**
M.A: EA	Local No: 5541 Sens.: 25.7 B/full: 9.6m^3s^{-1}													
F.A.R: SEI	Level: 2m UE: .27 FAI: 0.982													
Comment: 'Essex' (modified Flat V Crump) weir in 10.4m wide section. Model-based calibration assumes modularity; drowning is uncommon. Separate spillway accommodates flow > 16 m^3s^{-1}. Naturalised flows: 1966-75; very small net diminution in runoff. Flood storage lagoons (on R. Rom) influence flows patterns (from late 1980s). # A predominantly impermeable catchment (London Clay overlain in places by glacial deposits). Mainly rural headwaters, substantial - and growing - urban development in lower reaches.		1996	416	69	123	58	0.19	7.8	22/08	0.06	15/07	0.3	0.12	0.07
		1997	497	83	121	57	0.19	5.9	26/06	0.06	16/09	0.4	0.11	0.07
		1998	690	115	229	108	0.36	8.4	31/10	0.06	18/08	0.9	0.17	0.07
		1999	597	99	173	81	0.27	7.4	24/09	0.06	26/07	0.6	0.14	0.07
		2000	828	138										
037018	**Ingrebourne at Gaynes Park** C.A: 47.9 km^2	**70..95**	**599**		**219**		**0.33**	**29.0**	**21/11 1974**	**0.06**	**17/08 1972**	**0.7**	**0.19**	**0.09**
M.A: EA	Local No: 5550 Sens.: 23.3 B/full: 8.4m^3s^{-1}													
F.A.R: SEI	Level: 7m UE: .12 FAI: 0.987													
Comment: 'Essex' profile (modified Flat V Crump) weir in 9.5m wide section. All but exceptional floods contained. Model-based calibration assumes modularity; however, drowning occurs above about 7 m^3s^{-1}. Naturalised flow available for period 1970-75; minor net augmentation of runoff (transfer from R. Beam). # Largely impermeable catchment (London Clay/glacial deposits). Rural headwaters but substantial urban development around lower reaches.		1996	425	71	139	63	0.21	4.1	09/01	0.08	28/09	0.3	0.16	0.11
		1997	508	85	122	56	0.18	2.4	26/06	0.08	29/07	0.3	0.14	0.09
		1998	694	116	231	105	0.35	6.0	31/10	0.09	13/08	0.8	0.19	0.10
		1999	595	99	189	86	0.29	3.8	24/12	0.08	03/08	0.6	0.18	0.10
		2000	806	135	308	141	0.47	19.2	30/10	0.09	14/09	1.0	0.24	0.10
038013	**Upper Lee at Luton Hoo** C.A: 70.7 km^2	**60..95**	*661*		**100**		**0.22**	**9.1**	**17/06 1984**	**0.00**	**03/11 1995**	**0.5**	**0.17**	
M.A: EA	Local No: 4640 Sens.: 10.6 B/full: 3.8m^3s^{-1}													
F.A.R: G	Level: 98m UE: .28 FAI: 0.948													
Comment: Rectangular thin-plate weir (0.92m wide) plus insensitive broad-crested overfall weir for flows > 0.33 m^3s^{-1}. Outfall from an ornamental lake. Only very high floods exceed the capacity of the overfall weir. Flows are substantially reduced as a result of gw abstractions (significant export). Significant periods of zero flow (occasionally interrupted by small releases via sluice above the thin-plate weir). Pre-1966 data very suspect. # A Chalk catchment (with Drift) now substantially urbanised.		1996	470	71	35	35	0.08	2.5	12/02	0.00	17/06	0.2	0.04	
		1997	559	85	9	9	0.02	2.7	27/06	0.00	01/01	0.0		
		1998	856	130	90	90	0.20	8.5	27/09	0.00	03/02	0.4	0.12	
		1999	624	94	80	80	0.18	2.7	02/06	0.00	14/07	0.5	0.09	
		2000	898	136	110	110	0.25	3.9	29/10	0.00	21/01	0.6	0.12	
038018	**Upper Lee at Water Hall** C.A: 150.0 km^2	**71..95**	**660**		**269**		**1.28**	**15.8**	**30/05 1979**	**0.24**	**23/08 1976**	**2.1**	**1.12**	**0.50**
M.A: EA	Local No: 4690 Sens.: 12.9 B/full: 8.3m^3s^{-1}													
F.A.R: GEI	Level: 44m UE: .16 FAI: 0.946													
Comment: Crump weir, 6.0m wide in an artificial channel. Modular throughout the flow range. All flows contained. Some early data (of limited quality) for two nearby gauging stations. Luton STW effluent augments flows and strongly effects the low flow regime. Moderate net import of water. # Catchment is mainly pervious (Chalk) but with glacial Drift in the headwaters. Land use: principally agricultural with some important (expanding) urban centres.		1996	492	75	177	66	0.84	5.6	08/01	0.41	18/08	1.4	0.72	0.44
		1997	554	84	141	52	0.67	4.0	25/02	0.44	14/09	0.8	0.62	0.48
		1998	802	122	253	94	1.20	7.6	15/04	0.56	22/08	1.8	1.05	0.65
		1999	635	96	270	100	1.28	5.7	15/01	0.64	01/08	2.1	1.07	0.68
		2000	884	134	349	130	1.66	14.1	29/10	0.77	25/08	3.0	1.27	0.84
038017	**Mimram at Whitwell** C.A: 39.1 km^2	**70..95**	**656**		**72**		**0.09**	**0.7**	**13/10 1993**	**0.00**	**01/09 1992**	**0.2**	**0.09**	**0.02**
M.A: EA	Local No: 4730 Sens.: 55.0 B/full: 0.3m^3s^{-1}													
F.A.R: G	Level: 88m UE: FAI:													
Comment: Crump weir, 1.0m crest (rather insensitive) within wider section. All flows contained and modular. Low flows occasionally augmented by pumping from local tube wells but slight diminution due to gw abstraction is more characteristic. U/s cress-beds can influence low flow pattern. Discharge sustained from Chalk springs - hydrological catchment divide is uncertain. Dry for over three months in late 1997. # A predominantly pervious (Chalk), rural catchment.		1996	485	74	36	50	0.04	0.4	23/07	0.02	31/12	0.1	0.05	0.02
		1997	567	86	6	8	0.01	0.0	23/02	0.00	09/08	0.0	0.01	
		1998	826	126	23	32	0.03	0.1	25/12	0.01	02/01	0.0	0.03	0.01
		1999	571	87	63	88	0.08	0.2	01/06	0.03	06/12	0.1	0.08	0.04
		2000	880	134	58	81	0.07	0.2	31/12	0.03	30/01	0.1	0.07	0.04
038003	**Mimram at Panshanger Park** C.A: 133.9 km^2	**52..95**	**654**		**127**		**0.54**	**3.8**	**12/10 1993**	**0.14**	**19/08 1976**	**0.8**	**0.50**	**0.22**
M.A: EA	Local No: 4790 Sens.: 6.6 B/full: 2.3m^3s^{-1}													
F.A.R: GI	Level: 47m UE: .04 FAI: 0.986													
Comment: Critical-depth flume; 5m wide. Performance of flume under review (1999). Theoretical calibration confirmed by gaugings. All flows contained. Appreciable net export of water (considerable groundwater abstraction in headwaters). Very high baseflow component, but peak flows increasing due to urbanisation. # A predominantly permeable catchment (Upper Chalk - overlain by glacial deposits near headwaters); mainly rural but substantial urban growth in the lower valley - the Mimram drains part of Welwyn Garden City.		1996	499	78	85	67	0.36	5.8	23/07	0.21	18/09	0.5	0.32	0.22
		1997	555	85	56	44	0.24	1.5	26/06	0.16	19/08	0.3	0.23	0.18
		1998	780	119	78	61	0.33	1.6	09/04	0.21	22/08	0.4	0.30	0.22
		1999	614	94	114	90	0.48	1.6	02/07	0.28	13/09	0.7	0.48	0.29
		2000	868	133	128	101	0.54	2.4	29/10	0.31	13/09	1.0	0.48	0.34
038012	**Stevenage Brook at Bragbury Park** C.A: 36.0 km^2	**74..95**	**640**		**84**		**0.10**	**6.1**	**13/10 1993**	**>0.00**	**04/09 1976**	**0.2**	**0.04**	**0.01**
M.A: EA	Local No: 4827 Sens.: 60.0 B/full: 3.0m^3s^{-1}													
F.A.R: SG	Level: m UE: FAI:													
Comment: Flat V weir - 2.75m wide; constructed in 1974 to supersede the original broad-crested weir operated by Stevenage Development Corporation - flow records prior to 1974 are sporadic and of poor quality. The Flat V weir remains modular up to 4.1 m^3s^{-1}; higher floods uncorrected. Gw abstractions (net export) and the release of water from flood storage lagoons can influence the flashy flow regime. # A Chalk catchment now largely urbanised.		1996	485	76	57	68	0.07	2.5	23/07	0.01	10/07	0.1	0.03	0.01
		1997	531	83	58	69	0.07	1.6	27/06	0.01	10/08	0.2	0.02	0.01
		1998	703	110	89	106	0.10	2.3	09/04	0.01	20/09	0.3	0.03	0.01
		1999	639	100	71	85	0.08	3.2	24/12	0.01	25/05	0.2	0.02	0.01
		2000	835	130	119	142	0.14	3.8	30/10	0.01	22/08	0.3	0.05	0.01

				Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
038030	**Beane at Hartham**	C.A: 175.1 km^2		**79..95**	**641**		**108**		**0.60**	**30.6**	**13/10 1993**	**0.13**	**26/05 1992**	**0.9**	**0.49**	**0.20**
M.A: EA	Local No: 4890	Sens.: 16.3	S/full: 24.4m^3s^{-1}													
F.A.R: PG	Level: 35m	UE:	FAI:													
Comment: Flat V weir, 8m wide. All flows contained. Modular throughout the flow range; theoretical calibration adopted. Significant gw abstractions (particularly in the headwaters) and runoff from Stevenage (see 038012) influence river flows; moderate net export. # Solid geology: Chalk substantially overlain by boulder clay and glacial sands and gravel. Mainly rural but contain Stevenage. Significant runoff generated from clays high up the catchment.				1996	480	75	66	61	0.37	4.9	09/01	0.18	06/10	0.5	0.31	0.19
				1997	524	82	39	36	0.22	1.8	25/02	**0.12**	**23/09**	0.3	0.19	0.14
				1998	695	108	70	65	0.39	6.4	09/04	0.18	22/08	0.6	0.30	0.20
				1999	644	100	86	80	0.48	5.4	25/12	0.22	03/09	0.7	0.43	0.24
				2000	844	132	125	116	0.69	12.3	30/10	0.25	13/09	1.3	0.42	0.28
038029	**Quin at Griggs Bridge**	C.A: 50.4 km^2		**78..95**	**640**		**99**		**0.16**	**13.8**	**13/10 1993**	**0.01**	**11/09 1992**	**0.3**	**0.07**	**0.02**
M.A: EA	Local No: 4939	Sens.: 30.0	S/full: 11.5m^3s^{-1}													
F.A.R: G	Level: 67m	UE:	FAI:													
Comment: Flat V weir, 4.5m wide. Shallow depth of approach. Calibration assumes station is not subject to drowning. Net export of water - increasing from the mid-1980s; gw abstractions can be especially significant during droughts e.g. late-1990. Sewage effluent discharge pattern also sometimes detectable. # A mainly impervious catchment (extensive glacial deposits overlying Chalk); agricultural land use predominates.				1996	430	67	31	31	0.05	3.6	09/01	0.01	02/11	0.1	0.03	0.01
				1997	482	75	7	7	0.01	0.6	24/02	**>0.00**	**22/11**	0.0	>0.00	>0.00
				1998	694	108	51	52	0.08	6.8	15/04	0.01	01/09	0.1	0.02	0.01
				1999	656	103	62	63	0.10	5.3	24/12	0.02	22/11	0.2	0.04	0.02
				2000	862	135	145	146	0.23	9.7	30/10	0.04	07/09	0.5	0.06	0.04
038004	**Rib at Wadesmill**	C.A: 136.5 km^2		**79..95**	**631**		**119**		**0.52**	**23.9**	**13/10 1993**	**0.04**	**07/08 1992**	**0.9**	**0.30**	**0.10**
M.A: EA	Local No: 4980	Sens.: 12.0	B/full: 13.5m^3s^{-1}													
F.A.R: GI	Level: 47m	UE: .01	FAI: 0.999													
Comment: Trapezoidal flume plus side-spilling Crump weir on the overflow channel. Modular calibration has applied during rare periods of drowned flow. All except highest floods contained. Daily flow data available (1957-83) for d/s limited range station (38006). Flows influenced by significant gw abstractions (net export). # Geology: U Chalk extensively overlain by boulder clay; glacial sands and gravel in the valleys. Predominantly rural. Significant runoff generated from Buntingford, Thundridge and clays high up the catchment.				1996	441	70	48	40	0.21	8.3	09/01	0.05	16/10	0.3	0.12	0.06
				1997	489	77	15	13	0.06	1.1	25/02	**0.01**	**20/08**	0.1	0.06	0.02
				1998	703	111	77	65	0.33	11.8	15/04	0.06	01/09	0.7	0.14	0.07
				1999	657	104	92	77	0.40	8.8	25/12	0.10	13/09	0.7	0.20	0.12
				2000	873	138	181	152	0.78	18.4	30/10	0.06	07/09	1.8	0.37	0.12
038002	**Ash at Mardock**	C.A: 78.7 km^2		**80..95**	**626**		**120**		**0.30**	**13.0**	**29/01 1988**	**0.02**	**12/08 1992**	**0.6**	**0.15**	**0.05**
M.A: EA	Local No: 5080	Sens.: 24.3	B/full: 7.6m^3s^{-1}													
F.A.R: GI	Level: 36m	UE: .01	FAI: 1.000													
Comment: Flat V weir (1:10 cross-slope) 3.9m wide constructed in 1979, replaced a flume which was subject to bypassing and inaccurate at low flows (hence discharges assessed at d/s station - 38005). Current station remains modular and is virtually full range. U/s take storage, sluice activity and gw abstractions have a minor effect on baseflow dominated regime. # Solid geology U Chalk extensively overlain by boulder clay; glacial sands and gravel and alluvium in the valleys. Rural. Significant runoff generated from clays high up the catchment.				1996	452	72	56	47	0.14	5.0	09/01	0.05	29/09	0.2	0.08	0.05
				1997	502	80	19	16	0.05	1.0	25/02	**0.01**	**15/09**	0.1	0.04	0.02
				1998	738	118	83	69	0.21	8.2	15/04	0.04	20/09	0.4	0.09	0.04
				1999	671	107	97	81	0.24	4.6	28/01	0.05	13/09	0.5	0.11	0.06
				2000	922	147	215	179	0.54	13.6	**30/10**	0.08	12/09	1.4	0.21	0.09
038016	**Stansted Sp at Mountfitchet**	C.A: 20.5 km^2		**69..95**	*628*		**95**		**0.06**	**0.4**	**17/03 1980**	**0.00**	**01/09 1992**	**0.1**	**0.06**	**0.02**
M.A: EA	Local No: 5106	Sens.: 16.6	B/full: 0.1m^3s^{-1}													
F.A.R: G	Level: 12m	UE:	FAI:													
Comment: Two complementary thin-plate weirs (rectangular and 90 degree V notch) measuring spring flow discharging to the R. Stort. V notch rebuilt in 1989 and new rating table used. Very stable discharge but station can be overwhelmed in exceptional floods. 21/10/2001 peak triggered by >90mm rainfall. Significant local gw abstraction producing substantial net export of water. Hydrological catchment cannot be readily determined hence runoff is not representative. # The contributing area to the Chalk springs is mainly rural.				1996	465	74	40	42	0.03	0.1	09/03	0.01	16/12	0.0	0.02	0.01
				1997	503	80	5	5	>0.00	0.0	08/04	0.00	04/08	0.0	0.00	
				1998	723	115	17	18	0.01	0.0	29/12	0.00	01/01	0.0	>0.00	>0.00
				1999	661	105	64	67	0.04	*0.1*	*04/02*	0.02	30/11	0.1	0.04	0.02
				2000	878	140	87	92	0.06	0.1	28/11	0.03?	01/01	0.1	0.05	0.04
038028	**Stansted Brook at Gypsy Lane**	C.A: 25.9 km^2		**72..95**	**624**		**89**		**0.07**	**4.0**	**09/10 1987**	**0.00**	**24/07 1992**	**0.2**	**0.04**	**0.01**
M.A: EA	Local No: 5129	Sens.: 40.0	S/full: 5.5m^3s^{-1}													
F.A.R: SPG	Level: 61m	UE:	FAI:													
Comment: Flat V weir (1:10 cross-slope) in slightly trapezoidal channel (3.5m wide). Modular. All flows contained. Some early data (from 1964) available for a limited range weir d/s. Very few abstractions in the catchment but flows influenced by motorway runoff and u/s storage lagoon (Stansted Airport); sluice closure can result in occasional zero flows. Stable discharge at very low flows - due to spring outflows - but subject to artificial disturbance. # Mixed geology: Chalk dipping below Eocene clays; overlain by superficial deposits. Largely rural.				1996	464	74	48	54	0.04	0.7	12/02	0.01	18/06	0.1	0.03	0.01
				1997	522	84	28	31	0.02	0.3	25/02	0.00	28/05	0.0	0.02	0.01
				1998	752	121	105	118	0.09	2.7	15/04	0.01	25/07	0.2	0.04	0.02
				1999	679	109	93	104	0.08	1.7	28/01	0.01	10/09	0.2	0.04	0.02
				2000	931	149	193	217	0.16	**4.6**	**30/10**	0.01	13/08	0.4	0.07	0.02
038026	**Pincey Brook at Sheering Hall**	C.A: 54.6 km^2		**74..95**	**627**		**177**		**0.31**	**17.6**	**09/10 1987**	**0.01**	**26/08 1976**	**0.7**	**0.11**	**0.03**
M.A: EA	Local No: 5169	Sens.: 40.0	S/full: 16.8m^3s^{-1}													
F.A.R: SPI	Level: 43m	UE: .01	FAI: 0.984													
Comment: Flat V weir (1:10.9 cross-slope), width 4.02m. Minor impact of artificial influences. Spray irrigation can be significant (especially in the upper part of the catchment). Balancing ponds at Stansted Airport provide some headwater regulation. # Pervious (Chalk) headwaters, mainly London Clay in lowest reaches. Land use: mainly agricuttural but the Pincey Brook drains Stansted Airport and Hatfield Forest.				1996	406	65	61	34	0.11	2.5	09/01	0.01	15/07	0.2	0.06	0.02
				1997	505	81	42	24	0.07	1.0	19/12	0.01	08/08	0.2	0.05	0.02
				1998	692	110	192	108	0.33	15.5	15/04	0.03	01/09	0.8	0.12	0.03
				1999	651	104	174	98	0.30	8.7	24/12	0.03	29/05	0.7	0.14	0.04
				2000	835	133	396	224	0.68	**19.8**	**30/10**	0.03	15/08	1.6	0.28	0.04
038007	**Canons Brook at Elizabeth Way**	C.A: 21.4 km^2		**53..95**	*611*		**264**		**0.18**	**14.4**	**10/06 1993**	**0.01**	**20/06 1954**	**0.4**	**0.09**	**0.04**
M.A: EA	Local No: 5189	Sens.: 32.0	B/full: 9.0m^3s^{-1}													
F.A.R: N	Level: 38m	UE: .17.	FAI: 0.990													
Comment: Full range critical-depth flume in rectangular section. Theoretical calibration extends to 11 m^3s^{-1}. Over the period 1965-80 low flows were monitored at a Crump weir in series with the flume. Balancing reservoirs in Harlow (and the New Town development itself) influence the flow pattern but there are no significant abstractions or discharges. # The catchment is impervious - London Clay. Rural headwaters; heavily urbanised below.				1996	428	70	157	59	0.11	4.1	11/02	0.03	13/09	0.2	0.07	0.04
				1997	493	81	147	56	0.10	6.0	13/07	0.03	30/10	0.2	0.06	0.04
				1998	703	115	277	105	0.19	8.4	07/04	0.03	18/08	0.4	0.08	0.04
				1999	670	110	270	102	0.18	9.0	02/07	0.04	26/07	0.5	0.09	0.04
				2000	886	145	431	163	0.29	12.1	29/10	0.04	23/08	0.7	0.13	0.04
038027	**Stort at Glen Faba**	C.A: 280.2 km^2		**85..95**	**616**		**153**		**1.36**	**33.0**	**10/10 1987**	**0.05**	**07/08 1990**	**2.9**	**0.65**	**0.15**
M.A: EA	Local No: 5190	Sens.:	B/full: 18.5m^3s^{-1}													
F.A.R: GI	Level: 26m	UE:	FAI:													
Comment: Multi-path ultrasonic (cross-path), superseded a single-path device. Very low velocities (canalised river) hampered calibration. Some early dmfs estimated due to instrumentation malfunction. All but exceptional floods contained. Limited net impact of artificial influences but substantial gw abstraction in headwaters (a proportion is exported). # Chalk headwaters, London Clay dominates lower catchment (considerable Drift cover). Rural upper catchment, substantial urban development (including HarlowBishops Stortford) in the valley.				1996	437	71	69	45	0.61	10.0	09/01	0.09	13/06	1.0	0.46	0.15
				1997	501	81	50	33	0.44	5.1	27/06	0.09	12/08	0.8	0.36	0.14
				1998	714	116	138	90	1.22	17.7	16/04	0.10	22/09	3.1	0.60	0.24
				1999	670	109	154	101	1.37	*12.7*	*04/01*	0.09	07/10	3.0	0.82	0.35
				2000	876	142	323	211	2.86	**39.7**	**30/10**	0.17	08/06	7.1	1.49	0.49
038031	**Lee at Rye Bridge**	C.A: 758.3 km^2		93..95	674		183		4.40	87.6	13/10 1993	0.55	19/11 1995	8.0	2.68	0.75
M.A: EA	Local No:	Sens.:	B/full: 51.0m^3s^{-1}													
F.A.R:	Level: m	UE:	FAI:													
Comment: Multi-path, cross-configuration ultrasonic gauging station. 0.4km u/s of Feildes Weir - provides a check on a major component of 38001 flows. Sensibly continuous record. Channel occasionally overflows but gate operation at Feildes Weir greatly restricts overbank flow. Station is bypassed by separately monitored outflows from Ryemead STW. # A mainly pervious Chalk catchment. Predominantly rural headwaters. Significant urban growth in lower valley.				1996	476	71	53	29	1.27	25.1	09/01	0.23	28/09	2.2	0.90	0.28
				1997	527	78	32	17	0.78	12.1	25/02	0.22	02/10	1.2	0.64	0.36
				1998	743	110	110	60	2.63	39.7	15/04	0.64	31/08	4.3	2.01	0.79
				1999	644	96	120	66	2.90	25.6	25/12	0.56	18/11	5.2	2.26	0.77
				2000	878	130	201	110	4.81	63.8	30/10	1.31	06/10	10.6	2.74	1.58
038001	**Lee at Feildes Weir**	C.A: 1036.0 km^2		79..95	*639*		**134**		**4.41**	**118.0d**	**16/03 1947**	**0.00**	**02/10 1949**	**8.5**	**2.69**	**0.57**
M.A: EA	Local No: 5290	Sens.: 38.3	B/full: 51.7m^3s^{-1}													
F.A.R: PGEI	Level: 28m	UE: .06	FAI: 0.954													
Comment: From 1/1/97, flows normally sum of 38027 and 38031. Previously: thin-plate weir (insensitive - 29m wide) and 3 vertical-lift sluices; completed 1978 to improve hydrometric range and precision. Model rated. All flows (bar lockages) now contained but Ryemeads STW effluent bypasses. Pre-1978: barrage of gates/sluices (operation evident on hydrographs, pre-1930 especially); no peak flows prior to 1965, low flows probably under-estimated. Gauging instigated by Beardmore in 1850s. Significant g/w abstraction; net export from catchment. Naturalised flows (New River abstraction only) from 1883. # A mainly pervious (Chalk) catchment. Predominantly rural headwaters; significant urban growth in lower valley.				1996	467	73	59	44	1.93	36.2	09/01	0.37	17/07	3.6	1.32	0.50
				1997	521	82	37	28	1.21	15.9	25/02	0.32	02/10	1.9	0.99	0.54
				1998	734	115	117	87	3.86	51.3	15/04	0.79	22/09	7.5	2.64	1.09
				1999	651	102	129	96	4.23	35.4	04/01	1.08	18/10	7.7	3.11	1.39
				2000	879	138	231	172	7.56	99.1	30/10	1.91	25/08	17.5	4.27	2.17

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
038020	**Cobbins Brook at Sewardstone Road** C.A: 38.4 km^2	**71..95**	**611**		**179**		**0.22**	**40.0**	**29/07 1987**	**>0.00**	**26/09 1978**	**0.5**	**0.06**	**0.01**
M.A: EA	Local No: 5329 Sens.: 50.0 S/full: 19.9m^3s^{-1}													
F.A.R: P	Level: 17m UE: .04 FAI: 0.997													
Comment: Trapezoidal critical-depth flume, overall width 10m, insensitive at low flows. Drowning and damage to the exit transition (repaired 1992) influence the station's performance; recorded flows may be overestimates. Net impact of abstractions and discharges on the natural, responsive flow pattern is minimal; motorway runoff can, however, be significant. # Cobbins Brook drains an impervious (London Clay) catchment which includes part of Epping Forest and significant urban development in the vicinity of the gauging station.		1996	441	72	81	45	0.10	6.4	09/01	0.02	13/06	0.2	0.04	0.02
		1997	503	82	52	29	0.06	2.4	11/06	0.01	03/10	0.1	0.04	0.02
		1998	700	115	192	107	0.23	9.3	15/04	0.01	30/08	0.6	0.07	0.02
		1999	632	103	156	87	0.19	6.9	24/12	0.01	01/08	0.5	0.06	0.02
		2000	895	146	384	215	0.47	23.7	30/10	0.02	05/09	1.3	0.15	0.02
038024	**Small River Lee at Ordnance Road** C.A: 41.5 km^2	**73..95**	**633**		**243**		**0.32**	**18.7**	**31/05 1983**	**0.01**	**25/08 1976**	**0.6**	**0.21**	**0.07**
M.A: EA	Local No: 5339 Sens.: 22.9 S/full: 21.2m^3s^{-1}													
F.A.R: G	Level: 15m UE: FAI:													
Comment: Flat V weir (1:10 cross-slope), 8m wide. Subject to drowning - crest tapping does not operate effectively. Minor impact of artificial influences on flows, low discharges affected by gravel workings and pumped drainage from the M25 can be important. # A predominantly impervious (clay), responsive, catchment with substantial superficial cover. Suburban in the valley, rural headwaters with considerable woodland.		1996	502	79	133	55	0.17	4.0	08/01	0.03	17/09	0.3	0.13	0.05
		1997	523	83	94	39	0.12	2.3	26/06	0.03	10/09	0.2	0.08	0.03
		1998	706	112	195	80	0.26	6.8	15/04	0.03	21/08	0.6	0.15	0.05
		1999	655	103	192	79	0.25	5.0	24/12	0.04	02/08	0.6	0.15	0.07
		2000	883	139	366	151	0.48	17.7	29/10	0.05	14/09	1.1	0.26	0.08
038021	**Turkey Brook at Albany Park** C.A: 42.2 km^2	**71..95**	*669*		**152**		**0.20**	**20.7**	**30/05 1979**	**>0.00**	**10/09 1991**	**0.5**	**0.05**	**0.01**
M.A: EA	Local No: 5349 Sens.: 60.0 S/full: 16.8m^3s^{-1}													
F.A.R: PG	Level: 17m UE: .04 FAI: 0.950													
Comment: Flat V weir, 6m broad (insensitive) in a concrete-lined channel. All but extreme floods contained. Structure drowns occasionally. Very responsive flow regime. Minor net export due to groundwater abstractions. Large ornamental lake in headwaters. # A largely impervious catchment (Tertiary clays and glacial deposits). The headwaters drain Enfield Chase but there is significant urban development near the gauging station.		1996	529	79	65	43	0.09	6.7	08/01	>0.00	22/07	0.2	0.03	0.01
		1997	546	82	54	36	0.07	2.0	26/06	0.01	20/08	0.1	0.02	0.01
		1998	735	110	164	108	0.22	7.1	15/04	0.01	28/08	0.6	0.05	0.01
		1999	659	99	138	91	0.18	6.4	24/12	0.01	21/07	0.5	0.04	0.01
		2000	879	131	303	199	0.40	19.1	29/10	0.01	07/09	1.1	0.12	0.01
038014	**Salmon Brook at Edmonton** C.A: 20.5 km^2	**56..95**	**669**		**243**		**0.16**	**11.4**	**30/05 1979**	**0.01**	**06/11 1964**	**0.4**	**0.06**	**0.01**
M.A: EA	Local No: 5357 Sens.: 60.0 B/full: 6.0m^3s^{-1}													
F.A.R: P	Level: 12m UE: FAI:													
Comment: Flat V weir (1:10 cross-slope), 5m wide (insensitive at low flows) in slightly trapezoidal section - superseded a less effective (particularly at very low flows) compound broad-crested structure in 1980. Backing-up behind the d/s culvert can (rarely) result in drowning during flood conditions. No significant abstractions and discharges from/to the Salmon Brook. # Impervious (London Clay) catchment. Salmons Brook rises on Enfield Chase, in the lower reaches the catchment is heavily urbanised.		1996	504	75	180	74	0.12	4.5	08/01	0.04	07/08	0.2	0.07	0.04
		1997	539	81	161	66	0.10	5.2	26/06	0.03	29/10	0.2	0.06	0.03
		1998	750	112	292	120	0.19	4.7	05/01	0.03	28/08	0.4	0.08	0.03
		1999	656	98	271	112	0.18	7.4	09/08	0.02	26/05	0.4	0.07	0.03
		2000	892	133	492	202	0.32	**12.4**	**29/10**	0.03	07/09	0.8	0.14	0.04
038022	**Pymmes Brook at Edmonton Silver Street** C.A: 42.6 km^2	**54..95**	*681*		**363**		**0.49**	**37.1**	**20/07 1965**	**0.04**	**12/09 1969**	**1.0**	**0.29**	**0.11**
M.A: EA	Local No: 5369 Sens.: 42.0 B/full: 22.6m^3s^{-1}													
F.A.R: N	Level: 11m UE: .42 FAI: 0.982													
Comment: Crump weir (width: 6.16m) in concrete channel, installed in 1972; superseded a rated section. Few confirmatory gaugings at high flows. Rarely overtopped. Drowns regularly (c0.7m stage) - flows corrected since 1982; previous high flows under review. Pre-1965 runoff substantially enhanced by sewage effluent (now treated outside catchment). Currently no significant abstractions or discharges. # Impervious (London Clay) catchment. Pymmes Brook rises on Enfield Chase but catchment is now >80% urban.		1996	496	73	287	79	0.39	12.9	11/08	0.19	17/09	0.7	0.27	0.20
		1997	546	80	268	74	0.36	25.4	26/06	0.15	25/09	0.7	0.23	0.16
		1998	763	112	334	92	0.45	18.4	05/01	0.14	27/08	1.0	0.24	0.15
		1999	663	97	319	88	0.43	18.3	08/08	0.13	25/05	0.9	0.23	0.15
		2000	906	133	507	140	0.68	25.5	29/10	0.18	31/03	1.4	0.39	0.20
039040	**Thames at West Mill Cricklade** C.A: 185.0 km^2	**72..95**	**783**		**246**		**1.44**	**10.8**	**09/02 1974**	**0.01**	**30/08 1995**	**4.0**	**0.69**	**0.07**
M.A: EA	Local No: 190 Sens.: 28.6 S/full: 20.3m^3s^{-1}													
F.A.R: PGEI	Level: 79m UE: <.01 FAI: 0.999													
Comment: Compound Crump weir (crests: 2.5m and 4.5m wide) with crest-tapping; drowning now more frequent at high flows. Bypassing during extreme floods. Runoff somewhat diminished by gw abstractions but more than compensated by effluent imports from Cirencester. # Mixed geology: Thames rises on the Cotswolds (Oolitic L'st); lower catchment is chiefly Oxford Clay. Land use: primarily agricultural. Extensive gravel workings in the main valley.		1996	608	78	158	64	0.92	5.1	24/02	0.04	04/10	2.6	0.36	0.05
		1997	729	93	142	58	0.83	4.8	25/02	0.06	24/07	2.7	0.35	0.10
		1998	922	118	294	120	1.72	5.8	07/03	0.09	31/08	4.1	1.44	0.12
		1999	977	125	305	124	1.79	6.0	21/01	0.14	31/07	4.4	1.39	0.19
		2000	1088	139	426	173	2.49	7.2	05/11	0.12	03/09	5.6	1.89	0.16
039108	**Churn at Perrott's Brook** C.A: 59.0 km^2	90..95	876		331		0.62	3.3d	04/01 1994	0.00	01/09 1995	1.6	0.43	0.03
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 120m UE: FAI:													
Comment: Flat V weir, 6 metres wide, 1:10 cross-slope. Full range - tailwater levels measured to facilitate flow computation in the non-modular range (but further gaugings required to check the reduction factor). Previous maximum flows exceeded in Nov/Dec 2000. Baseflow dominant. Zero flow in severe drought conditions. # Permeable (Oolitic L'st) catchment on the dip-slope of the Cotswolds. Land use: mostly agricultural, some woodland in S of catchment.		1996	691	79							0.00	01/11			
		1997	838	96	153	46	0.29	1.5	31/12	0.04	19/08	0.8	0.19	0.05
		1998	992	113	404	122	0.76	3.0	07/01	0.05	25/09	1.5	0.77	0.07
		1999	1054	120	457	138	0.86	*3.1*	*20/01*	0.07	15/09	1.7	0.79	0.11
		2000	1207	138						0.08	13/09			
039073	**Churn at Cirencester** C.A: 84.0 km^2	**79..95**	**883**		**290**		**0.77**	**3.4**	**23/02 1995**	**>0.00**	**09/10 1995**	**1.9**	**0.51**	**0.05**
M.A: EA	Local No: 260 Sens.: 21.1 S/full: 9.4m^3s^{-1}													
F.A.R: GE	Level: 111m UE: FAI:													
Comment: Flat V weir (1:10 cross-slope, 4.5m broad). Auxiliary d/s water level recorder. Full range station; all flows contained but bypassing can occur at high flows (as in 2000/01). Predominantly natural catchment; some diminution of flow due to gw abstractions. # Pervious (Oolitic L'st) catchment on the dip-slope of the Cotswolds. Primarily rural.		1996	688	78	179	62	0.48	1.9	13/01	>0.00	13/10	1.3	0.20	
		1997	836	95	123	42	0.33	1.6	30/12	0.03	21/08	1.0	0.21	0.05
		1998	987	112	320	110	0.85	2.5	22/01	0.04	23/09	1.7	0.84	0.07
		1999	1049	119	366	126	0.97	**3.6**	**23/01**	0.09	15/09	2.2	0.82	0.13
		2000	1199	136	463	160	1.23	3.4	15/12	0.08	13/09	2.4	1.12	0.11
039035	**Churn at Cerney Wick** C.A: 124.3 km^2	**69..95**	**849**		**218**		**0.86**	**4.7**	**31/01 1971**	**0.00**	**05/11 1995**	**2.2**	**0.54**	**0.01**
M.A: EA	Local No: 290 Sens.: 90.0 S/full: 15.9m^3s^{-1}													
F.A.R: GEI	Level: 82m UE: <.01 FAI: 0.864													
Comment: Asymmetrical compound Crump weir (crests: 1.8m and 3.7m wide). Full range but bypassing can occur at high flows (e.g. during 2000/01). Very limited head during periods of low flow, hence sensitivity problems. Gw abstractions result in significant loss to the catchment; evaporation from gravel pits may also be a factor in recent years. # Primarily a pervious (Jurassic oolitic L'st) catchment but with Oxford Clay in lower reaches. Rural but Cirencester and the Cotswold Water Park close to Cerney Wick.		1996	666	78	140	64	0.55	2.7	09/01	0.00	02/08	1.5	0.19	
		1997	808	95	101	46	0.40	2.6	30/12	>0.00	18/08	1.3	0.21	0.01
		1998	968	114	263	121	1.04	3.5	09/01	0.00	14/09	2.2	0.98	
		1999	1026	121	296	136	1.17	3.7	26/01	0.07	14/09	2.9	0.96	0.12
		2000	1165	137	415	190	1.63	4.1	13/12	0.04	12/09	3.7	1.37	0.09
039087	**Ray at Water Eaton** C.A: 84.1 km^2	**74..95**	**711**		**481**		**1.28**	**32.2**	**27/09 1974**	**0.26**	**28/08 1976**	**2.5**	**0.82**	**0.44**
M.A: EA	Local No: 390 Sens.: 14.0													
F.A.R: GE	Level: 76m UE: FAI:													
Comment: Multi-path ultrasonic superseded (in 1989) a Crump weir (width: 5.195m) with crest and d/s recorders; Thames backwater caused frequent drowning and high submergence ratios - flood data is of limited precision. Flows heavily influenced by Swindon runoff (sewage effluent, balancing ponds etc.); net import of water. # The Ray rises in the Marlborough Downs and drains a relatively flat, mainly impervious, catchment. Largely agricultural land use but important sub-catchment contrasts - urbanisation in the headwaters.		1996	544	77	372	77	0.99	8.6	12/02	0.42	15/07	1.7	0.77	0.47
		1997	650	91	350	73	0.93	8.9	24/02	0.47	20/07	1.6	0.64	0.49
		1998	902	127	632	131	1.69	13.8	26/12	0.47	31/08	3.5	1.06	0.52
		1999	877	123	603	125	1.61	15.8	20/01	0.45	31/07	3.3	1.04	0.53
		2000	991	139						0.41	18/05			
039099	**Ampney Brook at Ampney St. Peter** C.A: 45.3 km^2	**83..95**	**804**		**388**		**0.56**	**4.1**	**05/01 1994**	**0.00**	**01/10 1995**	**1.3**	**0.40**	
M.A: EA	Local No: 470 Sens.: 40.0													
F.A.R:	Level: 95m UE: FAI:													
Comment: Flat V weir, 1:10 cross-slope. Theoretical calibration confirmed by gaugings. Drowning unlikely (but d/s stilling well installed). Full range. Primarily natural but gw abstraction lower down the Churn catchment is likely to have an impact. High runoff suggests that the contributing area > topographical catchment. Station is located just d/s of a fish farm (now closed). # A rural catchment developed principally on the pervious Great Oolite of the Cotswolds; the Ampney Brook is a dip-slope stream.		1996	612	76	263	68	0.38	1.6	01/01	0.00	21/09	0.9	0.23	
		1997	777	97	242	62	0.35	2.0	28/02	0.02	22/08	1.0	0.19	0.03
		1998	939	117	477	123	0.69	3.1	06/01	0.01	24/09	1.6	0.63	0.03
		1999	967	120	495	128	0.71	**4.6**	**19/01**	0.04	17/09	1.8	0.55	0.07
		2000	1095	136	680	175	0.97	**5.0**	**05/11**	0.04	18/09	2.1	0.70	0.05

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
039074	**Ampney Brook at Sheepen Bridge** C.A: 74.4 km^2	**80..95**	**785**		**312**		**0.74**	**10.3**	**28/12 1994**	**0.00**	**01/11 1995**	**1.8**	**0.48**	
M.A: EA	Local No: 490 Sens.: 60.0 S/full: 9.4m^3s^{-1}													
F.A.R: P	Level: 78m UE: FAI:													
Comment: Flat V weir (1:10 cross-slope, 4.5m broad). Often drowned. Calibration under review - gaugings indicate that the drowned flow reduction factor (based on tailwater levels) over-compensates for non-modularity. Limited head at low flows therefore insensitive. Some bypassing at highest flows. Small diminution of flow due to abstraction, otherwise a naturally responding catchment. # The Ampney Brook rises in the pervious Great Oolite series but the lower catchment is principally Oxford Clay. A rural catchment.		1996	595	76						0.00	08/08			
		1997	746	95	240	77	0.57	3.8	26/02	0.00	29/07	2.0	0.20	
		1998	915	117	441	141	1.04	4.3	08/01	0.00	01/09	3.5	0.71	
		1999	938	119	413	132	0.97	4.5	20/01	0.01	18/09	3.2	0.67	0.05
		2000	1063	135	600	192	1.41	5.0	07/11	0.01	13/09	3.9	0.88	0.02
039109	**Coln at Fossebridge** C.A: 82.0 km^2	**90..95**	**851**		**180**		**0.47**	**2.2**	**18/02 1995**	**0.02**	**07/11 1995**	**1.3**	**0.27**	**0.04**
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 117m UE: FAI:													
Comment: Crump-profile crest, 7.8m wide (constructed on original overfall). Modular until high flows but submerged in floods; some bypassing also - intermittent flow in small bypass channel not measured. 39020 and 39110 are d/s. # A rural, dip-slope, catchment developed on the Oolitic L'st of the Cotswolds.		1996	662	78	123	68	0.32	1.1	16/01	0.02	25/10	0.8	0.11	0.03
		1997	833	98	58	32	0.15	0.9	30/12	0.03	19/08	0.4	0.07	0.04
		1998	941	111	191	106	0.50	1.5	22/01	0.02	23/09	1.0	0.50	0.03
		1999	1056	124	240	133	0.62	2.2	23/01	0.04	04/09	1.4	0.52	0.06
		2000	1166	137						0.04	12/09			
039020	**Coln at Bibury** C.A: 106.7 km^2	**63..95**	**806**		**394**		**1.33**	**5.5**	**11/02 1990**	**0.19**	**19/08 1976**	**2.6**	**1.06**	**0.40**
M.A: EA	Local No: 660 Sens.: 20.8													
F.A.R: GE	Level: 101m UE: .01 FAI: 0.963													
Comment: Crump weir (9.1m broad). Modular throughout the range. Some overspill onto floodplain before design capacity reached. Submerged during floods. Limited impact of artificial influences on river flows - net import (sewage effluent). Baseflow dominated flow regime. # Pervious (Oolitic Limestone) catchment on the dip-slope of the Cotswolds; predominantly rural.		1996	641	80	297	75	1.00	2.7	12/01	0.34	02/11	2.1	0.60	0.37
		1997	818	101	220	56	0.75	2.6	31/12	0.36	03/10	1.6	0.56	0.39
		1998	935	116	455	115	1.54	4.0	07/01	0.46	25/09	2.5	1.53	0.50
		1999	*1023*	127	493	125	1.67	*5.9*	*02/07*	0.57	15/09	3.2	1.47	0.62
		2000	1144	142	647	164	2.18	**6.5**	**14/12**	0.57	13/09	4.2	1.94	0.61
039110	**Coln at Fairford** C.A: 130.0 km^2	91..95	853		499		2.06	6.2	21/02 1995	0.51	31/10 1991	4.3	1.78	0.78
M.A: EA	Local No: Sens.:													
F.A.R: E	Level: 84m UE: FAI:													
Comment: Electromagnetic gauging station (buried coil). C/m calibration to be completed. Station performance generally good to bankfull - reasonable velocities are maintained at low flows - but flows may be overestimated by around 10%. Levels affected by STW. # Permeable (Oolitic Limestone) catchment on the dip-slope of the Cotswolds. Rural.		1996	626	73	392	79	1.61	4.4	13/01	0.49	26/10	3.3	1.05	0.52
		1997	802	94	293	59	1.21	4.0	30/12	0.46	04/10	2.5	0.91	0.57
		1998	926	109	583	117	2.40	5.9	08/01	0.65	25/09	4.0	2.44	0.73
		1999	999	117	605	121	2.49	11.9	19/01	0.87	18/09	4.4	2.26	0.96
		2000	1124	132						0.63	06/10			
039090	**Cole at Inglesham** C.A: 140.0 km^2	**76..95**	**692**		**265**		**1.17**	**26.3**	**28/12 1979**	**0.05**	**13/10 1976**	**2.7**	**0.63**	**0.15**
M.A: EA	Local No: 790 Sens.:													
F.A.R: G	Level: 73m UE: .06 FAI: 0.970													
Comment: Compound Crump Weir (high central crest). Channel divides immediately below weir; part of the structure is subject to non-modular conditions (this can cause significant data processing problems). # Chalk scarp headwaters but catchment is largely low-lying and impervious (clay). A mainly rural catchment, some urban growth below the headwaters.		1996	504	73	160	60	0.71	9.2	12/02	0.08	05/09	1.6	0.39	0.10
		1997	599	87	98	37	0.43	6.7	25/02	0.07	23/07	1.0	0.23	0.08
		1998	856	124	372	140	1.65	16.7	03/11	0.16	24/09	3.8	0.90	0.18
		1999	798	115	353	133	1.57	16.4	20/01	0.14	29/07	3.5	0.90	0.19
		2000	910	132										
039042	**Leach at Priory Mill Lechlade** C.A: 76.9 km^2	**72..95**	**722**		**312**		**0.76**	**5.1**	**30/12 1979**	**0.01**	**13/08 1990**	**1.8**	**0.48**	**0.07**
M.A: EA	Local No: 890 Sens.: 32.0 S/full: 8.6m^3s^{-1}													
F.A.R: PE	Level: 72m UE: <.01 FAI: 0.980													
Comment: Crump weir, 4.5m broad with crest-tapping. D/s weed growth and backing-up from the Thames can result in drowning. Bypasses at high flows. Previous maxima exceeded during Nov/ Dec 2000. Effluent derived from outside the catchment results in small net augmentation of runoff; otherwise artificial influences are minimal. # A rural catchment on the dip-slope of the Cotswolds; mainly pervious.		1996	538	75	217	70	0.53	2.5	12/01	0.06	23/10	1.3	0.25	0.07
		1997	734	102	197	63	0.48	2.6	31/12	0.08	19/08	1.4	0.27	0.10
		1998	877	121	378	121	0.92	3.0	12/01	0.08	24/09	2.2	0.79	0.10
		1999	857	119	362	116	0.88	3.5	27/01	0.07	17/09	2.5	0.70	0.13
		2000	1019	141						0.21	13/09			
039142	**Windrush at Bourton on the Water** C.A: 65.5 km^2	95..95	774					1.2	27/12 1995	0.34	04/11 1995			
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 132m UE: FAI:													
Comment: Crump Weir. U/s and d/s levels monitored; structure rarely drowns but submerged during exceptional floods. # Station sited close to the edge of the Oolitic L'st outcrop.		1996	613	79	275		0.57	1.5d	24/02	0.31	24/10	1.0	0.46	0.32
		1997	811	105	225		0.47	1.1	30/12	0.30	18/08	0.8	0.40	0.32
		1998	889	115	365		0.76	1.7	08/01	0.37	25/09	1.3	0.73	0.40
		1999	1013	131	405		0.84	1.9	26/12	0.42	15/09	1.2	0.81	0.46
		2000	1107	143	514		1.06	*2.9*	*14/12*	0.44	12/09	1.8	0.93	0.47
039143	**Dikler at Bourton on the Water** C.A: 90.7 km^2	95..95	728					4.2	22/12 1995	0.21	05/11 1995			
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 124m UE: FAI:													
Comment: Crump Weir. All flows contained, no bypassing but weir submerged during floods. # Mixed geology: Oolites and Lias.		1996	576	79	228		0.65	3.7	09/01	0.17	16/09	1.5	0.46	0.19
		1997	782	107	205		0.59	3.2	24/02	0.19	16/08	1.3	0.41	0.24
		1998	866	119	369		1.06	4.9	09/04	0.19	31/08	2.2	0.95	0.26
		1999	949	130	393		1.13	4.6	23/12	0.28	13/09	2.1	1.05	0.33
		2000	1059	145	530		1.52	5.3	29/10	0.30	13/09	3.1	1.19	0.35
039076	**Windrush at Worsham** C.A: 296.0 km^2	**42..95**	*766*		**256**		**2.40**	**18.5d**	**08/02 1990**	**0.27**	**12/08 1944**	**5.3**	**2.17**	**0.62**
M.A: EA	Local No: 1080 Sens.: 13.5													
F.A.R: PN	Level: 91m UE: FAI:													
Comment: Multi-path ultrasonic commissioned in Dec 1995. Previously: Two adjustable radial gate (sharp-crested) weirs - drowning very rare but high flows unreliable; principally a low flow station, flood flows commonly not calculated. Some early flow data (from 1942) held by the measuring authority for the original rhymer weir. Negligible disturbance to the natural flow regime. # A pervious (Oolitic L'st) catchment on the dip-slope of the Cotswolds. Predominately rural - Witney is the largest settlement.		1996	579	76	185	72	1.73	7.9	09/01	0.55	24/09	3.8	1.17	0.58
		1997	789	103	166	65	1.55	6.6	25/02	0.51	16/08	3.3	1.15	0.66
		1998	877	114	304	119	2.85	9.8	04/01	0.79	23/09	5.6	2.53	0.87
		1999	941	123				16.6	20/01	0.74	13/09			
		2000	1065	139	438	171	4.10	17.2	13/12	0.81	12/09	8.0	3.18	0.95
039006	**Windrush at Newbridge** C.A: 362.6 km^2	**50..95**	**758**		**284**		**3.27**	**21.6**	**06/12 1960**	**0.11**	**26/08 1976**	**6.5**	**2.55**	**0.72**
M.A: EA	Local No: 1090 Sens.: 16.0													
F.A.R: PGI	Level: 63m UE: .02 FAI: 0.909													
Comment: Compound broad-crested weir (total crest width 8.3m) with complementary side-spilling weir (14.9m wide) into bypass channel. Subject to drowning; unreliable at high flows. Early data may be overestimated due to lack of weed cutting. From 1962 a calibration based upon gaugings was adopted. Improvements in the method of water level measurement made in 1969. Runoff diminished by a small net export of water (minor bypassing via side channels also occurs). # A predominantly pervious (Oolitic L'st) catchment on the dip-slope of the Cotswolds. Mainly rural. Gravel pit development in the lower valley.		1996	560	74	197	69	2.26	7.9	10/01	0.50	18/09	5.1	1.43	0.57
		1997	762	101	167	59	1.91	6.6	26/12	0.63	20/08	4.3	1.37	0.76
		1998	866	114	332	117	3.82	10.1	07/01	0.88	23/09	7.1	3.86	0.98
		1999	909	120	333	117	3.83	*15.0*	*22/01*	0.94	13/09	7.8	3.21	1.16
		2000	1029	136	445	157	5.10	**22.3**	**15/12**	0.94	04/09	9.2	4.32	1.13
039129	**Thames at Farmoor** C.A: 1608.6 km^2	92..95	803		325		16.56	90.8	06/01 1994	0.26	03/10 1995	42.8	9.13	0.68
M.A: EA	Local No: Sens.:													
F.A.R: P	Level: 60m UE: FAI:													
Comment: Multi-path cross-configuration ultrasonic gauging station d/s of intake for Farmoor Res. Drought flow accuracy uncertain (v. low velocities) and gaugings suggest that flows may be overestimated by around 5%. Naturalised flows not routinely calculated. Substantial left-bank by-passing (not via the Thames itself) under flood conditions. Levels affected by d/s gate movements, abstractions and lockages. # Catchment is predominantly rural u/s of the station. Geology: mixed - pervious headwaters (Oolitic l'st), Oxford Clay in the lower reaches.		1996	558	69	162	50	8.25	48.9	13/02	0.41	14/07	22.6	3.82	0.64
		1997	706	88	132	41	6.74	49.4	27/12	0.43	30/07	18.4	3.55	0.86
		1998	880	110	358	110	18.24	72.2	09/01	0.80	18/08	45.3	13.09	1.43
		1999	887	110				73.1	21/01	1.16	11/09			
		2000	1012	126	474	146	24.11	71.9	09/12	1.01	13/08	56.2	16.26	1.99

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
039008	**Thames at Eynsham** C.A: 1616.2 km^2	**51..95**	**740**		**266**		**13.61**	**82.6d**	**07/12 1960**	**0.12**	**01/09 1976**	**31.6**	**8.60**	**1.11**
M.A: EA	Local No: 1200 Sens.:													
F.A.R: SPE	Level: 60m UE: .02 FAI: 0.924													
Comment: Complex barrage of gates and weirs, total breadth 30m. Some bypassing at extreme discharges when structure can be submerged. Early flow data derived from once-daily gaugeboard readings. Naturalised flows available for period of record; off-take for Farmoor reservoir is immediately u/s (operating from 1955). # Geology: mixed - pervious headwaters (Oolitic L'st), Oxford Clay in lower reaches. Mainly rural with development concentrated along the valley bottom.		1996	557	75	163	61	8.31	50.2	10/01	0.32	26/06	22.1	4.05	0.96
		1997	706	95	131	49	6.70	48.7	26/12	0.93	30/07	18.2	3.78	1.16
		1998	879	119	346	130	17.74	72.4	08/01	0.95	29/08	41.1	13.41	1.59
		1999	887	120	352	132	18.04	*83.1*	*23/01*	1.42	05/09	44.1	12.88	2.01
		2000	1009	136	478	180	24.44	91.6	16/12	1.14	24/08	55.6	16.19	2.11
039034	**Evenlode at Cassington Mill** C.A: 430.0 km^2	**70..95**	**717**		**271**		**3.70**	**26.7**	**28/12 1979**	**0.12**	**25/08 1976**	**8.5**	**2.39**	**0.62**
M.A: EA	Local No: 1290 Sens.: 11.9 S/full: 59.8m^3s^{-1}													
F.A.R: EI	Level: 60m UE: .02 FAI: 0.967													
Comment: Complex configuration - compound Crump weir (crests: 4.0m and 3.7m) plus two side-spilling weirs (broad-crested, 7.5m broad and Crump 4.6m broad); the latter discharge to a canal section. Near-natural catchment but small net import of water and some limited storage in Blenheim Lake. # Headwaters largely impervious (Lias Series), pervious Oolitic L'st in lower reaches. Rural.		1996	493	69	177	65	2.41	16.9	10/01	0.44	19/09	5.8	1.22	0.50
		1997	693	97	160	59	2.18	14.2	26/12	0.56	22/08	5.4	1.24	0.64
		1998	813	113	347	128	4.73	21.8	11/04	0.77	23/09	10.7	3.40	0.86
		1999	831	116	328	121	4.47	23.1	21/01	0.87	13/09	11.0	2.95	1.03
		2000	919	128	420	155	5.72	20.6	09/12	0.78	13/09	13.4	4.06	0.94
039026	**Cherwell at Banbury** C.A: 199.4 km^2	**66..95**	**687**		**167**		**1.05**	**54.1**	**28/12 1979**	**>0.00**	**02/08 1976**	**2.8**	**0.39**	**0.02**
M.A: EA	Local No: 1420 Sens.: 12.0 S/full: 50.0m^3s^{-1}													
F.A.R: P	Level: 89m UE: .02 FAI: 0.971													
Comment: Asymmetrical compound Crump-type weir (crest widths: 3.0m, 8.9m). Modular limit about 22 m^3s^{-1}. April 1998 peak estimated at around 90 m^3s^{-1} (but level exceeded structure-full by c1.5m). Approx. 50 sq.km of the catchment drains directly to the Oxford Canal; some of this runoff returns (via an overfall weir) u/s of Banbury. River flows also diminished by a large u/s abstraction (Grimsbury); this can appreciably distort the flow hydrograph. Regime is relatively responsive. # Catchment consists mainly of Liassic formations and is rural in character.		1996	496	72	72	43	0.45	9.0	12/02	0.01	23/10	1.1	0.10	0.01
		1997	621	90	62	37	0.39	6.9	24/12	0.01	09/08	1.0	0.12	0.02
		1998	814	118	251	150	1.59	90.8	09/04	0.05	11/08	3.8	0.61	0.08
		1999	807	117	234	140	1.48	20.5	25/12	0.02	02/08	3.8	0.81	0.09
		2000	845	123	319	191	2.01	39.0	30/10	0.07	24/08	5.3	0.93	0.08
039144	**Sor at Bodicote** C.A: 87.7 km^2	**95..95**	**615**				**3.8**		**22/12 1995**	**0.14**	**05/11 1995**			
M.A: EA	Local No: Sens.:													
F.A.R: P	Level: 91m UE: FAI:													
Comment: Crump Weir (u/s and d/s levels monitored); replaces Adderbury (39051) which closed in April 1988. Significant abstraction u/s - but only operates when flows > 0.16 m^3s^{-1}. Peak of April 1998 flood estimated at around 17 m^3s^{-1}. # A largely impermeable (Middle Lias) catchment - rural in character.		1996	458	74	147		0.41	3.1	09/01	0.10	09/11	0.9	0.25	0.12
		1997	619	101	101		0.28	1.8	24/12	0.10	15/08	0.5	0.20	0.12
		1998	780	127	293		0.82	16.6	09/04	0.19	22/08	1.5	0.64	0.21
		1999	776	126	281		0.78	5.3	24/12	0.18	31/07	1.6	0.56	0.23
		2000	819	133	353		0.98	6.3	30/10	0.20	12/09	1.9	0.80	0.24
039021	**Cherwell at Enslow Mill** C.A: 551.7 km^2	**65-95**	**686**		**220**		**3.84**	**30.2**	**28/12 1979**	**0.08**	**27/08 1976**	**8.9**	**2.46**	**0.64**
M.A: EA	Local No: 1460 Sens.: 10.9 S/full: 74.0m^3s^{-1}													
F.A.R: PE	Level: 65m UE: .02 FAI: 0.983													
Comment: Asymmetrical compound Crump (crests: 3.05m and 6.10m) with side-spilling overfall weir for for flows > 10 m^3s^{-1}. Unsuitable for flood analysis; level measurement imprecise prior to 1967 and bypassing has varied in magnitude through time. Recorded peaks are underestimates (the true peak for the April 1998 flood probably exceeded 100 m^3s^{-1}). Limited impact of artificial influences on the flow regime. # A largely rural catchment containing Banbury in its upper reaches. Geology: mixed, predominantly pervious Liassic formations.		1996	488	71	134	61	2.33	13.4	11/01	0.47	17/09	5.2	1.32	0.57
		1997	644	94	111	50	1.93	13.7	27/12	0.48	19/08	4.4	1.25	0.65
		1998	815	119	270	123	4.72	>807	10/04	0.85	19/09	10.5	3.38	0.95
		1999	790	115	256	116	4.47	16.8	25/12	0.88	01/08	10.1	3.22	1.08
		2000	852	124	323	147	5.64	18.7	14/12	0.86	12/09	12.4	3.94	1.01
039017	**Ray at Grendon Underwood** C.A: 18.8 km^2	**62..95**	**643**		**168**		**0.10**	**16.4**	**10/07 1968**	**0.00**	**13/08 1995**	**0.2**	**0.01**	
M.A: EA	Local No: 1471 Sens.: S/full: 6.6m^3s^{-1}													
F.A.R: N	Level: 66m UE: <.01 FAI: 1.000													
Comment: Flat V replaced a trapezoidal critical-depth flume in 1999 in a channel 6.5m wide. Full range following increase in flume capacity in 1964. Data from 1982-86 less reliable, and incomplete; some data loss during 1999 rebuild. Operated as an experimental basin by IH until 1987, then Thames Water, now operated by EA. Negligible artificial disturbance to the very responsive flow regime - representative catchment, important in national network terms. # Relatively flat, impermeable (Oxford Clay) catchment given over to agriculture.		1996	468	73	92	55	0.05	2.7	12/02	>0.00	08/06	0.1	0.01	
		1997	531	83	33	20	0.02	0.8	26/02	0.00	02/06	0.0	0.00	
		1998	727	113						0.00	10/07			
		1999	699	109						0.00	24/07			
		2000	871	135	320	190	0.19	7.1	12/04	0.00	17/08	0.5	0.04	
039112	**Letcombe Brook at Arabellas Lake** C.A: 3.1 km^2	**92..95**	**819**		**336**		**0.03**	**0.1**	**16/01 1993**	**>0.0**	**09/07 1995**	**0.1**	**0.02**	
M.A: EA	Local No: Sens.:													
F.A.R:	Level: m UE: FAI:													
Comment: Flat V weir at outfall of lake. Regime of the Letcombe Brook is heavily influenced by gw abstraction; flow augmentation scheme in operation. # Catchment area derived from the Digital Terrain Model. The Letcombe Brook is fed from springs issuing from the scarp slope of the Lambourn Downs (Chalk); contributing area is very rural..		1996	539	66	182	54	0.02	0.1	12/01	0.00	13/07	0.0	0.01	
		1997	660	81				>0.0	04/08	0.00	01/01			
		1998	893	109	350	104	0.03	0.1	29/12	0.00	27/08	0.1	>0.00	>0.00
		1999	825	101	376	112	0.04	0.2	24/01	0.00	14/07	0.1	>0.00	>0.00
		2000	963	118	592	176	0.06	0.2	13/12	0.00	28/09	0.1	0.05	0.01
039061	**Letcombe Brook at Letcombe Bassett** C.A: 4.0 km^2	**71..95**	**738**		**670**		**0.09**	**1.1**	**04/01 1971**	**0.00**	**01/07 1976**	**0.2**	**0.06**	**0.01**
M.A: EA	Local No: 1761 Sens.:													
F.A.R:	Level: 106m UE: FAI:													
Comment: Flat V weir (3.0m wide) superseded original rectangular notch (1.0 m wide) in 1981. Baseflow dominated regime. Runoff suggests that the CA underestimates the contributing area. Flows substantially reduced by pumping from the Childrey Warren boreholes; ALF scheme implemented in 1992. # Entirely rural catchment on scarp slope of the Lambourn Downs; Chalk - Drift free except for peat on the highest hills in the S. Catchment area derived from the Digital Terrain Model.		1996	543	74	536	80	0.07	0.2	08/03	0.01	31/12	0.1	0.05	0.01
		1997	663	90	201	30	0.03	0.1	30/12	0.01	14/01	0.0	0.02	0.01
		1998	897	122				0.2	27/04	0.05	07/09			
		1999	830	112	831	124	0.11	*0.3*	*26/01*	0.03	10/09	0.2	0.07	0.04
		2000	970	131										
039081	**Ock at Abingdon** C.A: 234.0 km^2	**62..95**	**656**		**205**		**1.52**	**15.8**	**06/03 1972**	**0.11**	**23/08 1976**	**3.4**	**0.85**	**0.32**
M.A: EA	Local No: 1790 Sens.: 20.3 S/full: 22.7m^3s^{-1}													
F.A.R: GE	Level: 51m UE: .02 FAI: 0.984													
Comment: Crump weir 7.79m wide (auxiliary d/s tapping) superseded original compound structure in 1979. Weir drowns during floods - overspill can occur into Sandford Brook - more common pre-1979; no flow adjustment made. Substantial channel improvements but drowning now more frequent again. Runoff augmented by sewage effluent (derived from outside catchment). Contributing area exceeds topographical catchment. # Flat, rural valley in Vale of The White Horse. Mixed geology - 50% pervious; Chalk downland forms southern watershed, remainder mostly Tertiary clays.		1996	449	68	151	74	1.12	7.0	10/01	0.27	17/09	2.4	0.62	0.31
		1997	561	86	77	38	0.57	3.9	26/12	0.22	24/07	1.0	0.44	0.24
		1998	768	117	249	121	1.85	8.7	26/12	0.37	14/08	4.1	1.22	0.40
		1999	713	109	241	118	1.79	10.2	26/12	0.35	13/09	4.5	1.12	0.40
		2000	808	123	351	171	2.60	11.4	07/11	0.51	12/08	6.5	1.68	0.56
039046	**Thames at Sutton Courtenay** C.A: 3414.0 km^2	**73..95**	**703**		**230**		**24.85**	**221.0**	**18/11 1973**	**0.02**	**29/05 1976**	**67.2**	**13.79**	**2.17**
M.A: EA	Local No: 1800 Sens.:													
F.A.R: PEI	Level: 45m UE: FAI:													
Comment: Multi-path ultrasonic gauging station replaced original (first in the UK) single path device in 1982. Rectangular channel in straight, navigable reach. Levels and velocity profile influenced by d/s sluices. Early data of lower precision - isolated extreme minima and some negative flows in 1976 (not archived). All but highest flows contained. Station between offtake and discharge for Didcot Power Station (naturalised daily flows available). # Mixed geology: Oolitic L'st headwaters, Oxford Clay below. Mainly rural with development concentrated in the valleys.		1996	514	73	150	65	16.16	98.5	10/01	1.62	14/10	41.9	7.85	1.98
		1997	665	95	116	50	12.51	87.6	26/12	1.74	29/07	32.3	7.13	2.39
		1998	834	119	304	132	32.86	154.0	12/04	2.28	31/08	80.4	22.34	3.01
		1999	820	117	288	125	31.18	152.1	23/01	2.46	12/09	81.1	19.50	4.23
		2000	932	133	413	180	44.61	181.4	16/12	3.50	14/08	101.2	27.82	4.80
039002	**Thames at Days Weir** C.A: 3444.7 km^2	**38..95**	**713**		**257**		**28.05**	**349.0d**	**17/03 1947**	**0.05**	**07/07 1976**	**67.8**	**15.94**	**3.18**
M.A: EA	Local No: 1900 Sens.:													
F.A.R: PEI	Level: 46m UE: .03 FAI: 0.944													
Comment: Adjustable thin-plate weir (5.48m wide) plus 15 radial gates, replaced a barrage of radial and buck gates in 1969. Rating formulae based upon gaugings - tailwater calibration applies for flows > 70 m^3s^{-1}; above 100 m^3s^{-1} overspill occurs. Daily naturalised flows available for POR (equal to gauged flows up to 1973) - allow for Didcot Power Station losses only. Peak flows under review. # Mixed geology (Oolitic Limestone headwaters, Oxford Clay below). Predominately rural with development concentrated along the valley.		1996	514	72	166	65	18.07	116.0	11/01	2.50	18/09	44.8	9.41	2.96
		1997	662	93	128	50	14.01	105.0	25/02	2.26	29/07	36.0	8.34	3.14
		1998	831	117	331	129	36.13	158.0	12/04	3.15	09/08	91.3	24.43	4.19
		1999	818	115	311	121	33.95	*164.0*	*25/01*	3.67	12/09	90.9	22.50	5.52
		2000	929	130	432	168	47.08	*195.6*	*16/12*	4.52	15/08	111.4	28.59	5.72

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
039147	**Wendover Springs at Wendover Wharf** C.A: 9.5 km^2	**89..95**	**750**		**219**		**0.07**	**0.2d**	**03/02 1994**	**0.02**	**04/12 1990**	**0.1**	**0.06**	**0.03**
M.A: BW	Local No: Sens.:													
F.A.R:	Level: m UE: FAI:													
Comment: Thin-plate weir (0.91m wide) monitoring outflow from the Wendover Springs - which issue from the Chalk scarp - into the Wendover Arm of the Grand Union Canal; algal/weed growth upstream of crest can affect levels - overestimating runoff. Station commissioned in the 1962, processed flows from 1989 (microfilmed level charts for pre-1989 period). Important historical monthly series available for 1841-1897, but methods of flow measurement used pre-1962 not yet defined. Groundwater abstraction suspected to be cause of runoff decline from late 1880s.		1996	543	72	198	90	0.06	0.1d	26/03	0.04	01/11	0.1	0.06	0.04
		1997	631	84	118	54	0.04	0.1d	11/05	0.03	21/10	0.0	0.03	
		1998	940	125	171	78	0.05	0.1d	26/12	0.03	16/03	0.1	0.05	0.03
		1999	788	105	206	94	0.06	0.1d	16/02	0.03	25/11	0.1	0.06	0.03
		2000	1044	139	285	130	0.09	0.2d	13/12	0.05	13/02	0.1	0.07	0.05
039105	**Thame at Wheatley** C.A: 533.8 km^2	**89..95**	**641**		**231**		**3.90**	**53.1**	**04/02 1990**	**0.60**	**14/09 1990**	**10.0**	**2.02**	**0.97**
M.A: EA	Local No: Sens.:													
F.A.R: GE	Level: 50m UE: FAI:													
Comment: Multi-path ultrasonic (cross- configuration). Skewed flow, weedgrowth and summer temperature gradients can limit accuracy. Full range, railway embankment ensures no bypassing. Supersedes 39038 (u/s). Some spring flow contribution but responsive regime. Net import of water; sewage effluent is a sig. component of low flows. # The Thame drains a typical clay (principally Oxford Clay, some Greensand also) vale NW of the Chiltern escarpment. Land use: largely agricultural (considerable grassland); Aylesbury is the major town.		1996	460	72	153	66	2.59	27.5	26/02	0.66	20/09	5.6	1.45	0.79
		1997	544	85	88	38	1.50	12.2	26/02	0.73	04/06	2.3	1.18	0.80
		1998	782	122	295	128	5.00	35.7	27/12	0.92	20/08	12.9	2.44	1.02
		1999	697	109	242	105	4.10	25.5	17/01	0.74	28/07	10.9	2.24	0.87
		2000	869	136	374	162	6.31	47.8	31/10	1.04	23/07	15.8	3.36	1.11
039065	**Ewelme Brook at Ewelme** C.A: 13.4 km^2	**70..95**	**699**		**106**		**0.05**	**0.3**	**14/08 1980**	**0.00**	**01/01 1974**	**0.1**	**0.04**	**0.01**
M.A: EA	Local No: 1995 Sens.:													
F.A.R: N	Level: 66m UE: FAI:													
Comment: Flat V weir (width: 2m) installed in 1980 superseded (after 4-yr break) a thin-plate weir (width: 1.524m). Limited head - algal growth on crest can be a problem - but modular. Natural, stable flow regime (but local surface runoff can produce sub-daily events). 2000/01 dmfs outstanding. Some pre-1950 artificial channel re-alignment. Pristine scarp-slope chalk stream, gravel bed, fish farming and cress beds d/s (ceased activity in 1991). Gw catchment < topographical catchment. # Land use is rural/agricultural. Ewelme village is the only settlement.		1996	525	75	91	86	0.04	0.1	07/06	0.01	31/12	0.1	0.04	0.01
		1997	634	91	12	11	0.01	0.1	17/05	0.00	21/10	0.0	0.01	
		1998	805	115	82	77	0.03	0.1	01/08	0.01	01/01	0.0	0.03	0.02
		1999	771	110	132	125	0.06	0.1	01/06	0.03	02/11	0.1	0.05	0.03
		2000	939	134	145	137	0.06	0.1	31/12	0.04	01/01	0.1	0.06	0.04
039146	**Mill Brook at Blewbury** C.A: 2.0 km^2													
M.A: EA	Local No: Sens.:													
F.A.R:	Level: m UE: FAI:													
Comment: Flat V weir. Thames Water abstraction u/s. Flow constraint 40 Megalitres/day. Groundwater catchment substantially exceeds the topograhical catchment; runoff totals are unrealistic. # Rural catchment developed on the Chalk.		1996	488											
		1997	591		323		0.02	0.1	15/12	0.01	24/07	0.0	0.02	0.01
		1998	769		1688		0.11	0.3	27/04	0.05	11/10	0.1	0.11	0.06
		1999	737		1935		0.12	0.3	19/05	0.04	12/11	0.2	0.11	0.06
		2000	900		2346		0.15	0.4	30/12	0.07	16/10	0.2	0.15	0.08
039114	**Pang at Frilsham** C.A: 89.8 km^2	**91..95**	**760**		**72**		**0.21**	**1.1**	**26/04 1995**	**0.00**	**01/12 1992**	**0.5**	**0.13**	
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 74m UE: FAI:													
Comment: Flat V weir on ephemeral stretch of the Pang. Floods exceed bankfull and weedgrowth causes occasional drowning (flows adjusted but high submergence ratios limit accuracy). Monitors progress of Alleviation of Low Flows programme (headwater abstractions - currently much diminished - having substantially reduced runoff). Effluent can form a significant component of low flows. # A largely permeable (Chalk) rural catchment; mostly arable and pasture with significant woodland on the Tertiary outcrops (in the S).		1996	538	71	47	65	0.13	0.3	23/02	0.01	15/11	0.3	0.12	0.02
		1997	646	85	2	3	>0.00	0.0	19/02	0.00	14/06	0.0	0.00	
		1998	836	110	40	56	0.11	0.4	02/11	0.00	01/01	0.2	0.11	0.04
		1999	807	106	88	122	0.25	0.6d	03/03	0.09	11/09	0.5	0.20	0.09
		2000	965	127	128	178	0.36	1.0d	31/12	0.12	19/10	0.6	0.31	0.14
039027	**Pang at Pangbourne** C.A: 170.9 km^2	**68..95**	**702**		**114**		**0.62**	**6.5**	**22/11 1974**	**0.07**	**24/08 1976**	**1.1**	**0.52**	**0.19**
M.A: EA	Local No: 2190 Sens.: 17.4 S/full: 16.0m^3s^{-1}													
F.A.R: RGI	Level: 40m UE: <.01 FAI: 0.994													
Comment: Crump weir, 4.0m broad. Backing-up from Thames causes drowning, even submergence (crest-tapping performance has declined through time, tail-water tapping installed in 2001). No local bypassing but some overspill occurs into Sutham Brook during extreme floods. 1970s flows under review. Runoff substantially diminished by gw abstractions (but large reduction in Compton abstraction from early 1990s); occasional impact of WBGS but otherwise few artificial influences on flows. # Catchment is principally pervious (Chalk) but about 15% is impermeable (Reading Beds, London Clay and Alluvium); Drift also. A largely rural catchment.		1996	536	76	101	89	0.55	1.8	24/02	0.21	17/10	0.9	0.43	0.22
		1997	631	90	53	46	0.28	1.2	19/02	0.13	04/10	0.5	0.26	0.15
		1998	819	117	110	96	0.60	2.0	13/04	0.28	22/09	0.9	0.54	0.30
		1999	800	114	145	127	0.79	3.5	23/01	0.32	13/09	1.3	0.62	0.36
		2000	943	134	227	199	1.23	8.1	13/12	0.47	14/09	1.8	0.91	0.50
039116	**Sulham Brook at Sulham** C.A: 3.0 km^2	**91..95**	**668**		**725**		**0.07**	**1.3**	**13/10 1993**	**>0.00**	**14/08 1995**	**0.2**	**0.04**	**0.01**
M.A: EA	Local No: Sens.:													
F.A.R: E	Level: 43m UE: FAI:													
Comment: Flat V weir. U/s and d/s levels monitored; modest d/s gradient and limited channel capacity/siltation causes structure to drown for substantial periods. Runoff reduced by gw abstraction. Levels/flows can be affected by STW until the mid-1990s (when effluent diverted). # A very rural catchment developed mostly on Chalk; some woodland on the Tertiary outcrops.		1996	458	69	344	47	0.03	0.3	08/01	>0.00	03/08	0.1	>0.00	>0.00
		1997	517	77	160	22	0.02	0.1	19/02	>0.00	13/08	0.0	0.01	
		1998	766	115	922	127	0.09	1.0	01/11	>0.00	22/08	0.3	0.03	0.01
		1999	742	111	810	112	0.08	1.8	16/01	>0.00	09/09	0.2	0.03	0.01
		2000	888	133	1513	209	0.14	4.3	30/10	0.01	25/08	0.2	0.06	0.01
039130	**Thames at Reading** C.A: 4633.7 km^2	**92..95**	**754**		**290**		**42.54**	**199.0**	**02/02 1995**	**3.18**	**18/08 1995**	**104.1**	**23.85**	**5.95**
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 30m UE: FAI:													
Comment: Multi-path cross-configuration ultrasonic gauging station (incorporates adjustment for flows outside the transducer piers). Good c/m confirmation of calibration throughout the range. Sited beneath Reading Bridge. Levels affected by d/s weir and lock. # Mixed geology with Cotswold headwaters (Oolitic L'st) and Oxford Clay. Land use: predominantly rural but with important, and growing, urban development in the valley (i.e. Oxford and Reading).		1996	504	67	157	54	23.00	127.0	11/01	3.93	19/09	56.6	12.45	4.42
		1997	637	84	111	38	16.30	105.0	27/02	3.75	21/08	38.5	10.07	4.52
		1998	818	108	295	102	43.34	179.0	13/04	5.08	21/08	106.1	29.50	5.96
		1999	792	105	283	98	41.64	187.7	24/01	5.09	31/07	107.0	27.35	7.33
		2000	918	122	404	139	59.22	223.5	16/12	5.77	25/08	133.8	37.80	8.49
039037	**Kennet at Marlborough** C.A: 142.0 km^2	**72..95**	**804**		**190**		**0.85**	**7.1**	**07/12 1992**	**>0.00**	**01/11 1976**	**2.0**	**0.52**	**0.08**
M.A: EA	Local No: 2210 Sens.: 54.2 S/full: 36.3m^3s^{-1}													
F.A.R: G	Level: 127m UE: .01 FAI: 1.000													
Comment: Crump weir, 6.1m broad, with crest-tapping plus Crump crested side weir for high flows. Full range and not subject to drowning. Runoff is low and baseflow dominated. The hydrological catchment is smaller than the topographical catchment; some diminution in flow also results from gw abstraction. # Chalk catchment; predominantly rural.		1996	639	79	113	59	0.51	1.4	25/03	0.06	31/12	1.2	0.39	0.07
		1997	755	94	25	13	0.11	0.5	31/12	0.01	01/11	0.2	0.09	0.02
		1998	1016	126	238	125	1.07	2.7	18/01	0.23	08/10	1.8	1.12	0.28
		1999	1004	125	245	129	1.10	4.8	20/01	0.25	12/10	2.5	0.71	0.27
		2000	1184	147	389	205	1.75	8.9	13/12	0.44	13/09	3.0	1.71	0.50
039077	**Og at Marlborough Poulton Fm** C.A: 59.2 km^2	**80..95**	**790**		**167**		**0.31**	**2.0**	**07/03 1995**	**0.00**	**13/12 1990**	**0.8**	**0.19**	**0.01**
M.A: EA	Local No: 2219 Sens.: 30.0 S/full: 3.3m^3s^{-1}													
F.A.R: G	Level: 125m UE: FAI:													
Comment: Flat V weir (width: 3.0m) with auxiliary d/s recorder - seasonal weed growth causes drowning. Gw abstraction in the headwaters otherwise flow regime is natural and dominated by baseflow. # The Og is a Chalk stream draining from the Marlborough Downs. A rural catchment.		1996	618	78	90	54	0.17	0.5	25/03	>0.00	24/12	0.4	>0.00	>0.00
		1997	742	94	14	8	0.03	0.1	30/12	>0.00	21/10	0.1	0.01	
		1998	1009	128	213	128	0.40	0.8	18/01	0.07	15/10	0.7	0.42	0.09
		1999	958	121	232	139	0.43	2.1	26/01	0.06	31/10	1.1	0.26	0.07
		2000	1145	145	342	205	0.64	3.1	13/12	0.06	15/10	1.0	0.60	0.08
039101	**Aldbourne at Ramsbury** C.A: 53.1 km^2	**82..95**	**791**		**127**		**0.21**	**1.2**	**07/03 1995**	**0.01**	**23/12 1990**	**0.5**	**0.09**	**0.03**
M.A: EA	Local No: 2229 Sens.: 40.5													
F.A.R: N	Level: 106m UE: FAI:													
Comment: Two Flat V weirs - 1:10 cross-slopes (one is located on a bypass stream). Theoretical calibration. All flows contained. Sensibly natural flow regime. # The Aldbourne drains a Chalk downland catchment. Land use: predominantly agricultural - Aldbourne is the only significant settlement.		1996	613	77	73	57	0.12	0.4	25/03	0.02	31/12	0.3	0.08	0.03
		1997	713	90	14	11	0.02	0.1	11/05	0.01	26/09	0.0	0.02	0.01
		1998	978	124	115	91	0.19	0.4	31/12	0.02	01/01	0.4	0.19	0.05
		1999	917	116										
		2000	1064	135										

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
039043	**Kennet at Knighton** C.A: 295.0 km^2	**62..95**	**787**		**267**		**2.50**	**13.7**	**03/06 1975**	**0.10**	**21/07 1976**	**5.2**	**1.90**	**0.60**
M.A: EA	Local No: 2230 Sens.: 21.1													
F.A.R: G	Level: 105m UE: FAI:													
Comment: Two Crump weirs: 13.7m crest on the main channel plus a 1.7m crest on the Littlecote Stream. Very flat gradient - main weir is subject to frequent drowning with very high submergence ratios. Some pre-1980 flows uncorrected, data under review. Some bypassing during floods. Flows slightly diminished by gw abstraction. Baseflow dominates the flow regime. # Chalk catchment. Mainly rural (includes part of Savernake Forest) but some urban growth in the valley.		1996	626	80	180	67	1.68	3.9	24/02	0.52	30/12	3.1	1.48	0.59
		1997	741	94	80	30	0.75	1.5	31/12	0.41	23/10	1.1	0.69	0.50
		1998	1002	127	319	119	2.98	5.5	27/12	1.19	12/10	4.4	3.21	1.28
		1999	966	123	351	131	3.28	*9.8*	*26/01*	1.16	19/10	6.5	2.29	1.29
		2000	1143	145	487	182	4.54	11.1	14/12	1.52	06/10	7.4	4.77	1.60
039028	**Dun at Hungerford** C.A: 101.3 km^2	**68..95**	**781**		**229**		**0.74**	**3.5**	**14/11 1974**	**0.19**	**20/09 1976**	**1.3**	**0.60**	**0.28**
M.A: EA	Local No: 2239 Sens.: 26.3 S/full: 12.0m^3s^{-1}													
F.A.R: GN	Level: 99m UE: .01 FAI: 0.990													
Comment: Crump weir, 10.7m broad. Full range and modular. Abstractions and discharges are of minor significance. Small net loss, but essentially a natural baseflow-dominated flow regime. # A mainly pervious (Chalk) catchment of rural character (chiefly agricultural but the Dun drains part of Savernake Forest).		1996	653	84	179	78	0.57	1.8	09/01	0.25	16/10	1.0	0.52	0.26
		1997	708	91	115	50	0.37	1.0	25/03	0.20	17/08	0.6	0.34	
		1998	933	119	192	84	0.62	2.0	05/01	0.27	16/09	1.0	0.62	0.28
		1999	891	114	215	94	0.69	2.6	20/01	0.27	14/09	1.4	0.51	0.30
		2000	1093	140	287	125	0.92	2.9	08/12	0.33	11/09	1.4	0.91	0.36
039103	**Kennet at Newbury** C.A: 548.1 km^2	**89..95**	**785**		**267**		**4.64**	**17.4**	**01/02 1995**	**1.59**	**06/11 1990**	**9.5**	**3.30**	**1.82**
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 70m UE: FAI:													
Comment: Ultrasonic gauging station - six pairs of transducers in cross-path configuration. Relatively high velocities. Full range. New instrument kiosk installed in 1996 (to improve reliability in hot weather). Sensibly natural flow regime but possible small impact of West Berkshire Groundwater Scheme during drought conditions. # Principally a Chalk catchment. Mainly rural (arable and mixed farming) with some urban growth concentrated along the valley.		1996	631	80	216	81	3.75	9.2	09/01	1.75	25/10	6.0	3.13	1.88
		1997	724	92	132	49	2.29	5.0	29/12	1.43	02/10	3.1	2.23	1.50
		1998	962	123	*305*	114	5.30					7.5	5.59	2.70
		1999	931	119	330	124	5.74	16.9	20/01	2.35	10/09	10.8	4.24	2.65
		2000	1108	141	448	168	7.76	21.2	12/12	2.89	13/09	11.7	7.57	3.15
039033	**Winterbourne St at Bagnor** C.A: 49.2 km^2	**62..95**	**723**		**106**		**0.17**	**0.7**	**31/03 1978**	**0.01**	**01/11 1969**	**0.3**	**0.14**	**0.05**
M.A: EA	Local No: 2264 Sens.: 36.7 S/full: 0.9m^3s^{-1}													
F.A.R: RG	Level: 81m UE: <.01 FAI: 1.000													
Comment: Crump weir, 3m broad - originally 5.5m but reduced to improve sensitivity (in 1968). Full range. Runoff reduced by gw abstractions; for limited periods flows also substantially influenced by pumping and flow augmentation associated with the West Berks Groundwater Scheme (e.g. winter 1969/70, 1976, 1989 and 1998). # A Chalk catchment; very rural character.		1996	550	76	92	87	0.14	0.3	15/05	0.06	29/10	0.2	0.12	0.06
		1997	657	91	39	37	0.06	0.2	07/02	0.04	16/08	0.1	0.06	0.04
		1998	839	116	79	75	0.12	0.4	16/04	0.07	23/09	0.2	0.12	0.07
		1999	800	111	130	123	0.20	*0.6*	*05/02*	0.01	21/08	0.4	0.19	0.09
		2000	967	134	175	165	0.27	**0.8**	**12/12**	0.11	06/10	0.4	0.22	0.12
039019	**Lambourn at Shaw** C.A: 234.1 km^2	**62..95**	**739**		**231**		**1.71**	**5.3**	**02/03 1995**	**0.41**	**22/08 1976**	**2.8**	**1.50**	**0.76**
M.A: EA	Local No: 2269 Sens.: 13.8 S/full: 17.0m^3s^{-1}													
F.A.R: RG	Level: 76m UE: <.01 FAI: 0.983													
Comment: Crump weir (10.67m broad) with auxiliary d/s recorder. Possibility of a small overspill in high floods when storage may be provided by Donnington Lake. PWS abstraction in headwaters and d/s sluices (occasionally) influence flows, but net artificial disturbance to the regime is limited (apart from periods during which the West Berks Groundwater Scheme is operating - providing low flow support). Flow pattern is baseflow dominated. # Local suburban growth near station but primarily a rural catchment developed on the Berkshire Downs (Chalk).		1996	557	75	208	90	1.54	2.9	07/06	0.64	02/10	2.3	1.40	0.84
		1997	672	91	112	48	0.83	1.5	17/05	0.62	21/08	1.0	0.83	0.64
		1998	879	119	222	96	1.65	2.7	26/12	0.96	23/09	2.1	1.76	1.02
		1999	831	112	271	117	2.01	4.8	26/01	0.92	19/11	3.7	1.60	0.99
		2000	974	132	346	150	2.56	**6.7**	**19/12**	1.09	12/09	3.4	2.50	1.16
039025	**Enborne at Brimpton** C.A: 147.6 km^2	**67..95**	**806**		**273**		**1.28**	**30.6**	**20/01 1975**	**0.02**	**25/08 1976**	**2.8**	**0.72**	**0.18**
M.A: EA	Local No: 2279 Sens.: 15.8 S/full: 32.0m^3s^{-1}													
F.A.R: GI	Level: 59m UE: <.01 FAI: 0.985													
Comment: Asymmetrical compound Crump weir (crest widths: 3.0m and 4.6m). Drowning can occur above about 10 m^3s^{-1}; d/s recorder used to calculate flows since 1992. Highest flows are under-estimated as banks are overtopped. Net impact of abstractions (mostly gw) and discharges is very limited, but overall there is a net export of water. From 1989 impact of West Berks Groundwater Scheme may be evident on low flows. # Chalk outcrops in the headwaters but catchment is mainly impervious (Tertiary clays). Land use: principally agricultural.		1996	642	80	196	72	0.91	20.2	09/01	0.11	18/09	2.0	0.54	0.13
		1997	726	90	157	58	0.73	9.1	17/02	0.10	17/09	1.8	0.40	0.12
		1998	949	118	415	152	1.94	24.7	05/01	0.33	01/09	3.9	1.23	0.37
		1999	924	115	426	156	1.99	29.0	16/01	0.31	03/11	4.1	1.22	0.37
		2000	1080	134						0.39	12/09			
039016	**Kennet at Theale** C.A: 1033.4 km^2	**61..95**	**774**		**294**		**9.64**	**70.0**	**11/06 1971**	**0.93**	**21/08 1976**	**16.8**	**8.02**	**3.84**
M.A: EA	Local No: 2290 Sens.: 8.5													
F.A.R: RGI	Level: 43m UE: .01 FAI: 0.956													
Comment: Crump weir (15.9m broad) equipped with pressure tapping & d/s recorder. Cableway installed in 1999. All but highest flows contained. Flood flows may be underestimated. Little net impact of abstractions and discharges (minor contribution to K & A canal) but augmentation from WBGS during droughts. High baseflow component but responsive contribution from the R. Enbourne. Dmfs 04-24/12/98 estimated by NRFA (using 39103) due to gauging hut refurbishment. # A mainly pervious catchment (80% Chalk). Rural headwaters; urban development (and growth) concentrated along the valley.		1996	610	79	231	79	7.54	31.5	09/01	3.17	25/10	12.5	5.99	3.36
		1997	704	91	153	52	5.03	19.1	25/12	2.34	20/08	8.1	4.60	2.69
		1998	925	120	325	111	10.65	45.7	27/12	4.20	23/09	15.6	10.39	4.91
		1999	896	116	342	116	11.21	45.1	25/12	4.09	08/09	20.8	8.89	4.68
		2000	1057	137	464	158	15.16	55.3	08/12	5.28	13/09	28.8	13.59	5.96
039022	**Loddon at Sheepbridge** C.A: 164.5 km^2	**65..95**	**751**		**415**		**2.16**	**26.4**	**16/09 1968**	**0.52**	**26/08 1976**	**3.7**	**1.66**	**0.94**
M.A: EA	Local No: 2420 Sens.: 11.8 S/full: 50.0m^3s^{-1}													
F.A.R: GEI	Level: 42m UE: .05 FAI: 0.931													
Comment: Two Crump weirs (2.1m crest, plus 6.9m crest oblique to channel flow) superseded flume/side-spilling weir (subject to bypassing) in 1970. Both Crumps remain modular and all but extreme flows are contained. Net import of water into the catchment (e.g. via Basingstoke STW). # Headwaters are in the Chalk of the North Downs but the catchment is largely impervious. A predominantly rural catchment, containing some important - and growing - urban centres.		1996	604	80						0.93	10/09			
		1997	633	84	296	71	1.54	8.4	24/02	0.89	04/10	2.3	1.34	0.94
		1998	867	115	474	114	2.47	17.8	05/01	1.10	21/09	4.0	1.98	1.18
		1999	875	117	502	121	2.62	20.4	16/01	1.23	12/09	4.1	2.09	1.35
		2000	1004	134	655	158	3.41	22.4	30/10	1.24	13/09	6.5	2.51	1.31
039123	**Blackwater at Farnborough** C.A: 35.5 km^2													
M.A: EA	Local No: Sens.:													
F.A.R:	Level: m UE: FAI:													
Comment: Electromagnetic station installed as part of a R&D project into flow in two-stage channels. Calibration to be completed. # Tertiary geology - mainly Bagshot Beds with London Clay in the headwaters and alluvium in the valley. Substantial and expanding urban development including Farnborough and Aldershot but large rural tracts remain; significant areas of heathland and woodland.		1996	634												
		1997	637		296		0.33	2.4	24/02	0.09	29/10	0.5	0.32	0.15
		1998	825		299		0.34	3.0	31/10	0.02	25/07	0.7	0.27	0.08
		1999	811		475		0.53	2.8	24/12	0.25	27/07	0.9	0.45	0.26
		2000	1031		617		0.69	*4.3*	*06/11*	0.22	14/09	1.3	0.52	0.25
039015	**Whitewater at Lodge Farm** C.A: 44.6 km^2	**27-95**	*785*		**251**		**0.35**	**2.2**	**03/02 1990**	**0.08**	**23/08 1949**	**0.6**	**0.32**	**0.16**
M.A: EA	Local No: 2442 Sens.: 16.7 S/full: 3.0m^3s^{-1}													
F.A.R: G	Level: 72m UE: <.01 FAI: 1.000													
Comment: Crump weir, full range (but drowns in summer), superseded (1975) an insensitive rectangular thin-plate weir operated originally by Mid-Southern Water Co. Data prior to 1975 of much poorer quality (e.g. resulting from clinging nappe and damaged crest). Archived data: 1910-1926 monthly flows, 1927-1963 daily (but 7-day sequences of identical flows), from 1964 dmfs. Part of the catchment drains into the Basingstoke Canal; a proportion of this runoff returns to the Whitewater catchment. Stable regime, baseflow dominated, but some minor u/s disturbance to flow pattern. # Catchment is developed entirely on Chalk. Rural character.		1996	684	87	226	90	0.32	1.2	08/01	0.15	15/10	0.5	0.32	0.17
		1997	661	84	176	70	0.25	0.9	24/02	0.13	01/10	0.4	0.24	0.16
		1998	934	119	261	104	0.37	1.2	05/01	0.19	06/09	0.5	0.39	0.21
		1999	911	116	290	116	0.41	1.6	24/12	0.24	02/08	0.6	0.38	0.26
		2000	1103	141	428	171	0.60	2.3	07/12	0.26	16/09	0.9	0.57	0.29
039044	**Hart at Bramshill House** C.A: 84.0 km^2	**72..95**	**697**		**280**		**0.75**	**12.7**	**20/10 1987**	**0.10**	**24/08 1976**	**1.5**	**0.51**	**0.22**
M.A: EA	Local No: 2458 Sens.: 18.1 S/full: 12.1m^3s^{-1}													
F.A.R: E	Level: 50m UE: .04 FAI: 0.942													
Comment: Crump weir, 4.0m broad, with crest and d/s tappings. Even so, poor low flow record due to weed-induced drowning. Banks overtopped in extreme floods. Flows augmented by effluent derived from outside the catchment. # A mainly impermeable (Eocene formations with some overburden of glacial deposits) catchment. Mixed land use - largely rural with considerable woodland but includes growing urban development near headwaters.		1996	617	89	232	83	0.62	5.8	09/01	0.17	02/09	1.1	0.48	0.21
		1997	625	90	201	72	0.53	3.5	24/02	0.20	15/07	0.9	0.41	0.24
		1998	809	116	320	114	0.85	7.6	05/01	0.23	21/09	1.6	0.65	0.31
		1999	807	116				7.1	25/12	0.20	04/07			
		2000	986	141	435	155	1.16			0.14	27/07	2.3	0.75	0.24

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
039007	**Blackwater at Swallowfield** C.A: 354.8 km^2	**52..95**	**710**		**264**		**2.97**	**41.0**	**16/09 1968**	**0.46**	**18/08 1953**	**5.6**	**2.18**	**0.93**
M.A: EA	Local No: 2469 Sens.: 11.5 S/full: 26.0m^3s^{-1}													
F.A.R: GE	Level: 42m UE: .07 FAI: 0.895													
Comment: Two Crump weirs (main 4.6m, side 2.7m wide) superseded original flume, plus side-spilling weir, in 1970. Weir capacity c27 m^3s^{-1}. Minor bypassing of the side weir in flood conditions; overflows more frequent pre-1970. Sewage effluent is an important component of low flows (large STWs at Camberley and Sandhurst), also some net import of sewage effluent. Exact delineation of the hydrological catchment is difficult. # Chalk in the headwaters, clay, sands and alluvium in the valley. Substantial and expanding urban development in the catchment but some large rural tracts remain; significant areas of heath and woodland.		1996	613	86	246	93	2.76	24.1	09/01	1.13	26/07	4.6	2.23	1.21
		1997	614	86	203	77	2.28	16.2	25/02	1.13	30/07	3.7	1.92	1.26
		1998	809	114	294	111	3.31	23.4	05/01	1.20	22/08	5.8	2.53	1.29
		1999	805	113	315	119	3.55	26.7	25/12	1.21	30/07	6.3	2.71	1.39
		2000	987	139	459	174	5.15	35.6	06/11	1.33	25/08	11.1	3.36	1.50
039138	**Loddon at Twyford** C.A: 751.8 km^2	**95..95**	**696**					**25.4**	**23/12 1995**	**2.42**	**19/10 1995**			
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 32m UE: FAI:													
Comment: Multi-path ultrasonic in cross configuration. Full range. Power supply and instrumentation problems (e.g. difficulties have been encountered with the lowest of the six flight paths) - these are being addressed. # Chalk headwaters, mainly London Clay.		1996	589	85				37.6	10/01	2.03	16/07			
		1997	605	87	176		4.21	31.3	22/09	2.25	31/07	6.9	3.45	2.47
		1998	815	117						2.69	21/08			
		1999	810	116	308		7.35	58.7	26/12	2.95	28/07	12.6	5.52	3.21
		2000	967	139	439		10.44	67.7	07/11	3.12	25/08	21.9	6.78	3.68
039039	**Wye at High Wycombe** C.A: 67.7 km^2													
M.A: EA	Local No: Sens.: S/full: 1.1m^3s^{-1}													
F.A.R:	Level: m UE: FAI:													
Comment: Flat V (1:10 cross-slope) installed, in 1996, as part of ALF programme. Non-modular for significant periods - heavy weedgrowth in d/s section. Previously flows were monitored, from 1937, at the same site - Two thin-plate weirs, 1.8 and 1.4m broad. Discontinued in 1975 due to poor hydrometric performance - data unreliable (not held on NRFA).		1996												
		1997	691											
		1998	937					1.1	26/09	0.00	07/01			
		1999	838		152		0.33	1.6	08/08	0.06	05/12	0.6	0.29	0.08
		2000	1001		139		0.30	0.9	12/12	0.14	24/10	0.4	0.28	0.17
039023	**Wye at Hedsor** C.A: 137.3 km^2	**64..95**	**765**		**230**		**1.00**	**4.4**	**25/09 1981**	**0.25**	**25/12 1973**	**1.5**	**0.98**	**0.46**
M.A: EA	Local No: 2590 Sens.: 13.8 S/full: 12.0m^3s^{-1}													
F.A.R: GI	Level: 27m UE: .07 FAI: 0.983													
Comment: Crump weir, 6.1m broad. Modular throughout the flow range. All but extreme floods contained. Low flows are significantly influenced by abstractions (particularly groundwater) and discharges (e.g. Wycombe STW); flashy response from urban fraction but regime remains baseflow dominated. # A mainly pervious (Chalk) catchment with an overburden of glacial deposits on the higher ground. Dip-slope valley in the Chilterns; contains several significant urban/suburban centres.		1996	589	77	174	76	0.75	2.5	08/01	0.40	17/10	1.0	0.76	0.48
		1997	666	87	115	50	0.50	2.0	06/08	0.36	23/08	0.6	0.49	0.38
		1998	935	122	201	87	0.87	2.6	26/09	0.55	25/01	1.1	0.86	0.62
		1999	831	108	270	117	1.18	2.8	09/08	0.64	05/12	1.6	1.13	0.70
		2000	995	130	282	123	1.22	2.9	07/12	0.89	14/09	1.7	1.17	0.93
039052	**The Cut at Binfield** C.A: 50.2 km^2	**57..95**	**677**		**234**		**0.37**	**18.1**	**01/06 1981**	**0.01**	**06/09 1967**	**0.8**	**0.21**	**0.06**
M.A: EA	Local No: 2620 Sens.: 16.7 S/full: 26.0m^3s^{-1}													
F.A.R: EI	Level: 46m UE: .12 FAI: 0.942													
Comment: Broad-crested weir (crest: 13.7m wide) plus adjustable low flow notch (crest: 1.22m wide) at outfall from an ornamental lake. Early flow data (prior to installation of notch) less precise. Hydrograph shows mixed rural/urban response - including the effect of balancing ponds. Significant and increasing effluent component during periods of low flow (primarily from Ascot STW - this represents a net import of water). # An impermeable catchment (London Clay). Rural headwaters, including considerable woodland but major New Town (Bracknell) development below - almost 30 per cent urban overall.		1996	538	79	200	85	0.32	5.6	08/01	0.06	07/09	0.6	0.24	0.09
		1997	573	85	207	88	0.33	6.4	26/07	0.09	11/09	0.6	0.26	0.10
		1998	779	115	326	139	0.52	9.1	05/01	0.07	18/08	1.0	0.44	0.10
		1999	764	113	302	129	0.48	9.2	24/12	0.02	15/08	1.0	0.34	0.08
		2000	934	138	442	189	0.70	15.7	29/10	0.10	15/08	1.5	0.40	0.12
039072	**Thames at Royal Windsor Park** C.A: 7046.0 km^2	**79..95**	**714**		**254**		**56.67**	**331.0**	**09/02 1990**	**11.80**	**07/09 1991**	**120.4**	**40.52**	**16.42**
M.A: EA	Local No: 2700 Sens.:													
F.A.R: RPGEI	Level: 14m UE: FAI:													
Comment: Multi-path ultrasonic gauging station superseded, in 1988, original single-path configuration (installed 1978). Some gaps in record. Calibration confirmed by gaugings. All but exceptional floods contained. Substantial baseflow from the Chalk and Oolitic L'st, quicker response from the Oxford Clay and Lower London Tertiaries. Station is u/s of the major PWS off-takes for London. # Scarp and vale topography developed on diverse geology. Predominately rural headwaters contrast with considerable suburban growth in the lower valley.		1996	532	75	177	70	39.49	193.0	10/01	12.90	18/09	80.1	26.09	13.63
		1997	638	89	127	50	28.40	133.0	26/02	11.00	22/07	58.2	21.60	12.13
		1998	836	117	281	111	62.79	199.0	04/11	14.30	10/08	137.0	48.13	16.32
		1999	809	113	287	113	64.08	252.0	27/12	15.10	01/08	150.8	46.49	20.56
		2000	944	132	415	163	92.53	317.5	15/12	18.50	14/09	196.9	62.08	22.38
039125	**Ver at Redbourn** C.A: 62.6 km^2	**93..95**	**768**		**80**		**0.16**	**1.4**	**13/10 1993**	**>0.00**	**01/03 1993**	**0.4**	**0.14**	**0.03**
M.A: EA	Local No: Sens.:													
F.A.R: E	Level: 92m UE: FAI:													
Comment: Flat-V weir (4.0m wide). U/s and d/s level measurements are routinely made - drowns but d/s reach regularly maintained by dredging to improve modularity. Gauging station initially constructed to monitor low flows. Runoff is reduced by gw abstraction - which has been greatly reduced since May 1993 (the Ver is included in the EA's Alleviation of Low Flows Programme). # A predominantly rural catchment on the dip-slope of the Chilterns (Chalk); land-use mainly arable and pasture.		1996	509	66	12	15	0.02	0.2	23/07	0.00	05/10	0.1	0.01	
		1997	601	78			>0.00	0.2	11/06	0.00	01/01			
		1998	906	118	3	4	0.01	0.1	22/10	0.00	01/01	0.0	0.00	
		1999	716	93	26	33	0.05	0.5	02/07	0.01	24/11	0.1	0.05	0.02
		2000	974	127	36	45	0.07	1.9	08/08	0.02	05/10	0.2	0.04	0.02
039126	**Red at Redbourn** C.A: 18.5 km^2	**93..95**	**746**		**97**		**0.06**	**0.7**	**13/11 1993**	**0.01**	**09/12 1995**	**0.1**	**0.05**	**0.01**
M.A: EA	Local No: Sens.:													
F.A.R: E	Level: 92m UE: FAI:													
Comment: Flat-V weir (4.0m wide) which frequently drowns. U/s and d/s measurements are routinely made. D/s reach regularly maintained by dredging which improves modularity. Gauging station initially constructed to monitor low flows. Flow data for Feb 1995 unreliable due to weed growth. # A predominantly rural catchment on the dip-slope of the Chilterns (Chalk); land-use is mainly arable/pasture.		1996	490	66	29	30	0.02	0.3	03/11	>0.00	27/09	0.0	>0.00	>0.00
		1997	578	77	17	18	0.01	0.1	11/06	0.00	08/01	0.0	0.00	
		1998	860	115										
		1999	692	93	78	80	0.05	0.4	24/12	>0.00	21/11	0.1	0.05	0.01
		2000	985	132	86	89	0.05	2.4	08/08	0.01	12/09	0.1	0.03	0.01
039014	**Ver at Hansteads** C.A: 132.0 km^2	**56..95**	**712**		**99**		**0.41**	**2.6**	**27/12 1979**	**0.01**	**02/09 1976**	**0.8**	**0.36**	**0.08**
M.A: EA	Local No: 2819 Sens.: 22.2 S/full: 9.8m^3s^{-1}													
F.A.R: G	Level: 62m UE: .07 FAI: 0.946													
Comment: Compound Crump weir - 2 crests, each 2.44m broad - superseded (in 1969) original broad-crested weir (plus bypass channel); the early flow data are of a lesser quality. Topographical catchment area significantly exceeds the hydrological catchment. Flows diminished by large groundwater abstractions (including PWS for Luton) - increased sharply since 1950 changing the river's character. Restoration programme (ALF) over the 1991-93 period; abstractions much reduced by late 1990s. # Pervious (Chalk) catchment. Rural headwaters, significant urban development in the lower valley.		1996	505	71	58	59	0.24	1.1	08/01	0.06	17/09	0.4	0.20	0.07
		1997	590	83	24	24	0.10	0.8	25/02	0.04	03/10	0.2	0.08	0.05
		1998	864	121	67	68	0.28	1.0	08/04	0.10	17/09	0.5	0.24	0.13
		1999	703	99	117	118	0.49	1.2	16/01	0.22	13/09	0.8	0.45	0.26
		2000	964	135	132	133	0.55	2.3	30/10	0.25	12/09	1.0	0.45	0.28
039013	**Colne at Berrygrove** C.A: 352.2 km^2	**34..95**	**696**				**0.79**	**15.2**	**28/12 1979**	**0.00**	**01/08 1974**	**1.6**	**0.56**	**0.12**
M.A: EA	Local No: 2830 Sens.: 28.2 S/full: 7.4m^3s^{-1}													
F.A.R: GEI	Level: 55m UE: FAI:													
Comment: Compound Crump Weir superseded (in 1991) compound thin-plate weir (9.0m broad - often drowned and bypassed). Flows over the new weir include those for the Bucknall's Brook. Effluent (Blackbird's STW) is now a major component of low flows - can produce abrupt flow changes. Groundwater catchment difficult to delineate; losses occur (to the Lee) via swallow holes. Runoff also diminished by long term gw abstraction (restoration progamme began in 1991). # A largely pervious (Chalk) catchment. Rural headwaters; considerable urban development in the valley. Extensive gravel workings.		1996	507	73	40	56	0.44	3.6	26/02	0.02	16/09	0.7	0.35	0.13
		1997	573	82						0.01	23/08			
		1998	820	118	57	80	0.63	6.5	03/11	0.08	13/08	1.3	0.38	0.12
		1999	692	99	86	121	0.96	7.6	16/01	0.17	09/09	2.0	0.63	0.23
		2000	919	132	144	203	1.61	**25.6**	**30/10**	0.34	21/08	3.5	0.88	0.39

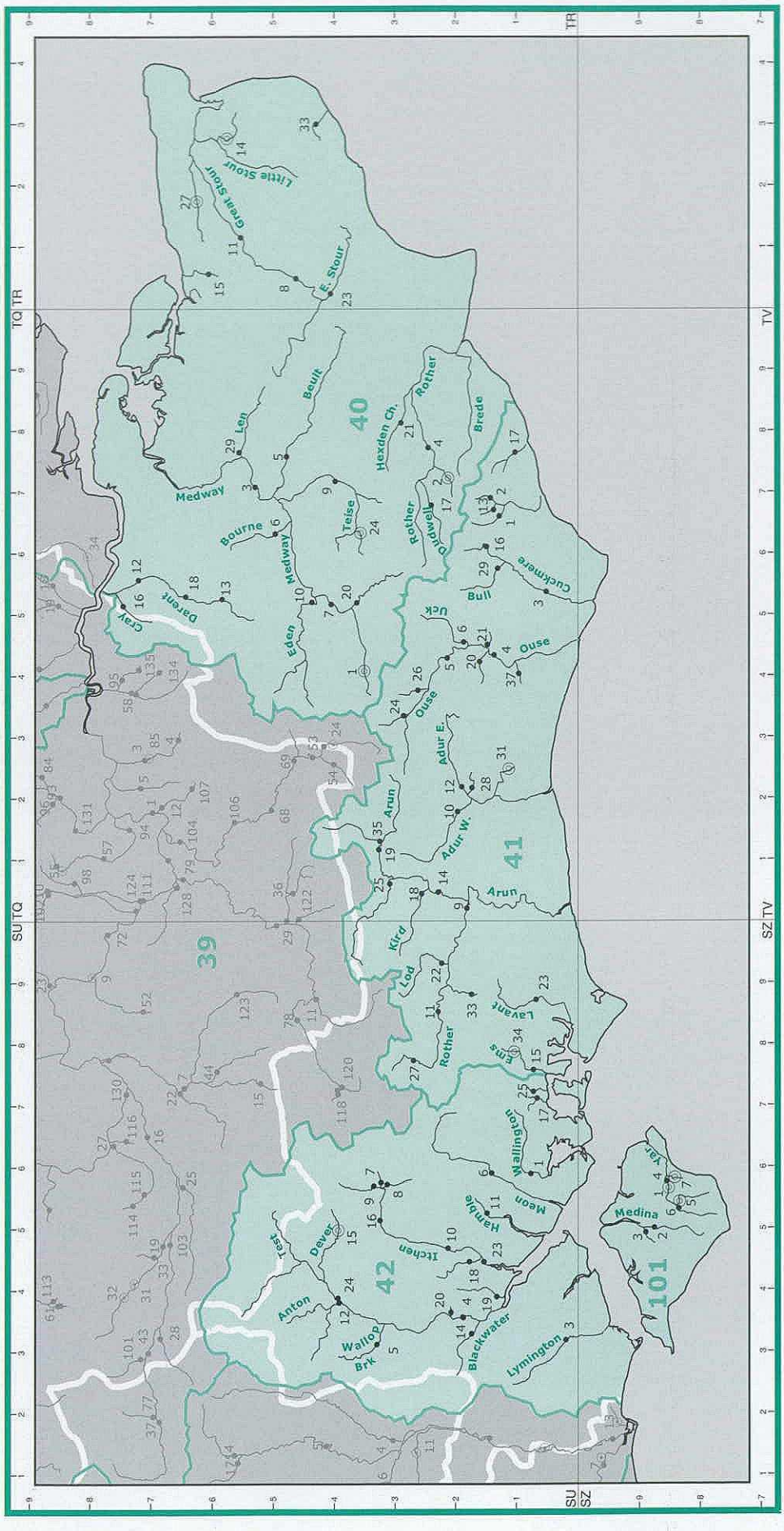
		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
039089	**Gade at Bury Mill** C.A: 48.2 km^2	**75..95**	**742**		**105**		**0.16**	**1.2**	**05/07 1983**	**>0.00**	**05/12 1976**	**0.3**	**0.14**	**0.03**
M.A: EA	Local No: 2841 Sens.: 23.3													
F.A.R:	Level: m UE: .03 FAI: 0.979													
Comment: Rectangular flume with side contractions installed by Hemel Hempstead Development Corporation; urban runoff has a significant effect on flood peaks. Balancing ponds u/s within built-up area. Leak in stilling well discovered in 1990. Vandalism and debris in channel can create problems. # Dip-slope stream draining the Chilterns; solid geology Chalk with some tertiary and extensive boulder clay cover. A mainly rural catchment draining to Hemel Hempstead.		1996	518	70	57	54	0.09	0.4	03/11	0.04	02/11	0.1	0.09	0.04
		1997	601	81	22	21	0.03	0.3	26/06	0.01	01/10	0.0	0.03	0.02
		1998	897	121	47	45	0.07	0.7	08/04	0.02	22/01	0.1	0.07	0.03
		1999	720	97	122	116	0.19	0.5	28/02	0.07	05/12	0.3	0.15	0.08
		2000	1007	136	121	115	0.18	0.7	20/12	0.09	05/02	0.3	0.15	0.10
039030	**Gade at Croxley Green** C.A: 184.0 km^2	**70..95**	**714**		**161**		**0.94**	**4.7**	**10/10 1987**	**0.05**	**03/09 1976**	**1.5**	**0.89**	**0.34**
M.A: EA	Local No: 2849 Sens.: 26.8 S/full: 14.8 m^3s^{-1}													
F.A.R: GI	Level: 50m UE: FAI:													
Comment: Compound Crump-type weir (three sections, total breadth 10.1m). The negligible inflow from the Grand Union Canal via an overfall weir is no longer monitored. The net effect of abstractions and discharges is to make the runoff rather unrepresentative; overall net export of water. # Pervious headwaters (Chalk) with Tertiary deposits (mostly impervious) in the valley. Mixed land use: rural hills, considerable urban development below.		1996	527	74	119	74	0.69	4.0	11/08	0.27	19/10	1.0	0.70	0.38
		1997	606	85	81	50	0.47	2.6	26/06	0.15	14/09	0.6	0.45	0.30
		1998	876	123	151	94	0.88	2.7	15/06	0.37	24/02	1.2	0.83	0.53
		1999	738	103	226	140	1.32	4.8	01/06	0.67	21/12	1.9	1.23	0.80
		2000	1009	141	243	151	1.41	3.9	30/10	0.78	21/02	2.2	1.28	0.94
039088	**Chess at Rickmansworth** C.A: 105.0 km^2	**74..95**	*761*		**182**		**0.61**	**1.9**	**01/04 1993**	**0.05**	**28/08 1976**	**1.0**	**0.58**	**0.25**
M.A: EA	Local No: 2859 Sens.: 22.3													
F.A.R: PGE	Level: 47m UE: .03 FAI: 0.960													
Comment: Crump weir (6.0m broad) with auxiliary d/s recorder. Full range station. The baseflow dominated flow regime is influenced by sewage effluent. Abstractions are of mainly low consumptive type with some gw abstractions for PWS; small net export from the catchment. # The Chess is a Chalk stream draining the dip-slope of the Chilterns. Headwaters are rural; significant urban growth in the lower valley.		1996	570	75	107	59	0.36	1.0	12/02	0.18	16/10	0.5	0.35	0.19
		1997	651	86	65	36	0.22	0.6	24/02	0.13	02/10	0.3	0.21	0.15
		1998	927	122	134	74	0.45	1.0	26/12	0.25	12/01	0.6	0.45	0.27
		1999	816	107	207	114	0.69	1.2	07/03	0.36	24/11	1.0	0.63	0.39
		2000	1062	140	217	119	0.72	1.6	12/12	0.49	02/01	1.0	0.65	0.51
039010	**Colne at Denham** C.A: 743.0 km^2	**52..95**	**718**		**172**		**4.05**	**18.4**	**14/10 1993**	**0.74**	**26/08 1976**	**6.4**	**3.72**	**1.83**
M.A: EA	Local No: 2870 Sens.: 14.4 S/full: 17.5 m^3s^{-1}													
F.A.R: GEI	Level: 34m UE: .08 FAI: 0.786													
Comment: Twin semi-circular broad-crested weirs (one section subject to drowning). Insensitive - overall crest length 30m. Few high flow gaugings. All flows contained. Complex water utilisation within the catchment, considerable groundwater abstraction - net diminution in flows - but increasing effluent contribution (including Maple Lodge STW) to low flows. Hydrological and topographical divides do not coincide. # A largely Chalk catchment with clays in the valleys supplemented by extensive gravel tracts. Rural headwaters with considerable suburban development in the middle to lower reaches.		1996	524	73	119	69	2.80	9.9	09/01	1.39	18/08	3.9	2.57	1.61
		1997	590	82	94	55	2.21	6.2	26/06	1.48	03/10	2.7	2.12	1.67
		1998	849	118	146	85	3.44	9.4	02/11	1.84	29/08	5.2	2.98	2.03
		1999	731	102	198	115	4.67	10.5	21/01	2.36	12/09	7.1	4.28	2.76
		2000	964	134	236	137	5.55	15.9	31/10	2.70	06/09	10.5	4.38	2.89
039127	**Misbourne at Little Missenden** C.A: 47.2 km^2	**93..95**	**806**		**128**		**0.19**	**0.9**	**26/04 1995**	**0.05**	**18/12 1995**	**0.4**	**0.15**	**0.08**
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 101m UE: FAI:													
Comment: Rectangular thin-plate weir with flanking Crump crests. Theoretical rating supported by gaugings (more scheduled to confirm calibration). Screen u/s of weir requires regular maintenance. Heavy gw pumping in the headwaters has reduced base flows (the Misbourne is included in the EA Low Flow Alleviation Programme). # A mostly rural catchment on the dip-slope of the Chilterns (Chalk).		1996	588	73	37	29	0.06	0.2	08/04	0.01	29/10	0.1	0.05	0.02
		1997	662	82						0.00	09/07			
		1998	968	120						0.03	01/01			
		1999	831	103	90	70	0.13	0.2	07/03	0.08	05/12	0.2	0.13	0.08
		2000	1063	132	112	88	0.17	0.5	27/12	0.12	03/02	0.2	0.16	0.12
039102	**Misbourne at Denham Lodge** C.A: 136.0 km^2	**84..95**	**751**		**59**		**0.26**	**2.7**	**08/05 1988**	**0.05**	**27/05 1992**	**0.5**	**0.22**	**0.08**
M.A: EA	Local No: 2879 Sens.: 17.4													
F.A.R: GE	Level: 35m UE: FAI:													
Comment: Crump weir (crest: 3.5m wide) plus Flat V (width: 2.0m, 1:10 cross-slope) on small distributary. High flow range under review but drowning rare. Bypassed only in exceptional floods. Baseflow dominated Chalk stream, influent near the Chalfonts. Runoff diminished by PWS abstractions; counteracted by ALF scheme from 1992. Gw catchment: 81 sq.km. # Elongated dip-slope catchment in the Chilterns. Urban growth in valley but catchment is mostly Green Belt - agriculture with scattered tracts of woodland.		1996	576	77	28	47	0.12	0.5	09/01	**0.04**	**02/10**	0.2	0.10	0.04
		1997	629	84	13	22	0.06	0.2	24/02	**0.02**	**21/09**	0.1	0.05	0.02
		1998	927	123	33	56	0.14	0.5	03/11	0.07	24/02	0.2	0.11	0.07
		1999	825	110	63	107	0.27	0.7	24/12	0.17	12/09	0.4	0.26	0.18
		2000	1021	136	90	153	0.39	1.4	30/10	0.19	07/09	0.7	0.30	0.20
039098	**Pinn at Uxbridge** C.A: 33.3 km^2	**84..95**	**661**		**165**		**0.17**	**10.0**	**08/05 1988**	**>0.00**	**08/08 1993**	**0.4**	**0.04**	**0.01**
M.A: EA	Local No: 2889 Sens.:													
F.A.R: N	Level: 31m UE: FAI:													
Comment: Electromagnetic (overhead coil) station in formalised trapezoidal section. Encouraging full-range performance, more gaugings required to confirm high flow calibration. All but exceptional floods contained. Flashy regime. Very limited impact of artificial influences on the flow pattern (multiple 0.01 m^3s^{-1} entries are an instrumental artifact). # Surburban catchment W of London. Largely impermeable. Headwaters rise in countryside but substantial development d/s - including Pinner, Ruislip and Ickenham.		1996	495	75				5.4	08/01					
		1997	524	79	87	53	0.09	4.6	26/06	0.01	14/05	0.2	0.03	
		1998	779	118	*418*	253	0.44			0.01	17/08	0.9	0.12	0.01
		1999	741	112	190	115	0.20	7.9	02/06	0.01	23/05	0.5	0.06	0.01
		2000	929	141				9.5	06/11	0.02	13/09			
039111	**Thames at Staines** C.A: 8120.0 km^2	**90..95**	**704**		**210**		**54.12**	**297.0**	**10/01 1994**	**4.50**	**16/10 1990**	**138.6**	**33.05**	**10.98**
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 10m UE: FAI:													
Comment: Ultrasonic gauging station - multi-path (6) in cross configuration; transducers located in piles set in the channel. Excellent agreement between multi-meter check gaugings and US calibration. Levels affected by gate and lock movements. In hot weather temperature gradients can deflect beams. Major PWS abstractions u/s. # Scarp and vale topography. Diverse geology. Predominately rural headwaters contrast with substantial urban and suburban development in the lower reaches.		1996	530	75	132	63	34.02	202.0	10/01	6.20	12/11	77.0	15.67	9.11
		1997	632	90	81	39	20.89	144.0	26/12	6.60	21/07	46.5	13.54	9.24
		1998	836	119	239	114	61.52	*223.0*	*07/01*	10.00	16/08	141.3	45.87	12.31
		1999	801	114						11.00	24/07			
		2000	944	134	353	168	90.66	*323.9*	*16/12*	10.80	23/09	202.2	60.89	17.72
039128	**Bourne (South) at Addlestone** C.A: 90.1 km^2	**92..95**	**708**		**311**		**0.89**	**8.7**	**10/01 1994**	**0.22**	**21/08 1995**	**1.8**	**0.79**	**0.35**
M.A: EA	Local No: Sens.:													
F.A.R: E	Level: 11m UE: FAI:													
Comment: Velocity-area station - low level sharp-crested weir beneath a road bridge acts as the control. Approach not ideal but confirmatory gaugings up to approx. 10 m^3s^{-1}. Some bypassing into R. Wey system (via the canal) at greater than approx. 9 m^3s^{-1}. Rating change in Oct 1993 (earlier data may need reprocessing). # Geology largely Bagshot Beds with some urban development d/s.		1996	518	73	232	75	0.66	5.0	09/01	0.26	22/07	1.1	0.58	0.31
		1997	582	82	210	68	0.60	2.9	06/08	0.31	21/08	0.9	0.52	0.34
		1998	756	107	284	91	0.81	4.9	05/01	0.28	13/08	1.3	0.66	0.34
		1999	769	109	303	97	0.87	7.7	25/12	0.22	08/09	1.5	0.68	0.36
		2000	956	135										
039118	**Wey at Alton** C.A: 44.6 km^2	**91..95**	**877**		**54**		**0.08**	**0.5**	**07/03 1995**	**0.00**	**01/12 1995**	**0.2**	**0.03**	
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 101m UE: FAI:													
Comment: Flat V weir (1:10) cross-slope. U/s and d/s levels monitored. Baseflow dominated regime - the Upper Wey is ephemeral. Significant abstractions in the catchment. # Mostly Chalk; Upper Greensand outcrops in the east. Alton is the only large settlement; land use is largely pasture/arable.		1996	764	87	16	30	0.02	0.1	22/04	0.00	01/01	0.1	0.01	
		1997	734	84	4	7	0.01	0.1	09/10	0.00	01/01	0.0		
		1998	1060	121	33	61	0.05	0.2	26/05	0.00	06/01	0.1	>0.00	>0.00
		1999	984	112	61	113	0.09	0.4	13/04	0.00	10/10	0.2	>0.00	>0.00
		2000	1236	141	109	202	0.15	0.9	29/10	0.03	06/10	0.3	0.13	0.03
039119	**Wey at Kings Pond (Alton)** C.A: 45.9 km^2	**91..95**	**877**		**69**		**0.10**	**0.6**	**19/04 1995**	**0.00**	**01/11 1995**	**0.3**	**0.06**	
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 99m UE: FAI:													
Comment: Rectangular thin-plate weir at outfall from lake. Theoretical rating. Debris obstructing u/s grill can cause minor fluctuations in level. Flow data for Apr-Jul 1995 unreliable due to weed growth. # Mostly Chalk and Upper Greensand. Rural (apart from Alton).		1996	763	87	30	43	0.04	0.2	24/02	0.00	20/08	0.1	0.03	
		1997	733	84	18	26	0.03	0.6	25/02	0.00	14/06	0.1	0.00	
		1998	1060	121										
		1999	982	112										
		2000	1238	141	136	197	0.20	0.6	12/12	0.04	06/10	0.3	0.17	0.05

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
039120	**Caker Stream at Alton** C.A: 88.1 km^2	**91..95**	**941**		**26**		**0.07**	**1.6**	**10/01 1993**	**0.00**	**04/11 1995**	**0.2**	**0.01**	
M.A: EA	Local No: Sens.:													
F.A.R: E	Level: 100m UE: FAI:													
Comment: Flat V weir. U/s and d/s levels monitored. Weedgrowth controlled by regular maintenance. Ephemeral stream but relatively responsive. # Geology mixed. A very rural catchment.		1996	842	89	15	58	0.04	1.5	19/11	0.00	15/07	0.1	0.01	
		1997	788	84	10	38	0.03	0.9	24/02	0.00	01/06	0.1	0.00	
		1998	1117	119	27	104	0.08	1.5	24/10	>0.00	10/08	0.2	0.02	
		1999	1044	111	26	100	0.07	2.1	18/01	0.00	05/09	0.2	>0.00	>0.00
		2000	1354	144										
039078	**Wey(north) at Farnham** C.A: 191.1 km^2	**78..95**	**870**		**120**		**0.73**	**22.6**	**03/02 1990**	**0.12**	**28/08 1984**	**1.4**	**0.52**	**0.18**
M.A: EA	Local No: 3020 Sens.: 38.9													
F.A.R: GE	Level: 64m UE: FAI:													
Comment: Modified Crump weir (width: 9.14m) with thin-plate along the crest line. Calibration is theoretically based - a few confirmatory gaugings. Non-modular at high flows - also possible bypassing via culvert immediately u/s. August 1997 dmfs estimated. Baseflows considerably diminished by gw abstractions in the headwaters. # A mainly Chalk catchment with Gault Clay in the lower reaches. Predominately rural, some urban development on the watershed.		1996	779	90	98	82	0.59	9.4	09/01	0.18	23/09	0.9	0.45	0.20
		1997	738	85	68	57	0.41	*4.7*	*24/02*	**0.11**	**01/09**	0.7	0.33	0.14
		1998	1051	121	129	108	0.78	6.3	05/01	0.27	25/09	1.4	0.60	0.29
		1999	984	113	141	118	0.86	13.4	25/12	0.26	12/09	1.7	0.56	0.29
		2000	1267	146	233	194	1.41	**28.1**	**30/10**	0.34	13/09	2.8	0.93	0.39
039011	**Wey at Tilford** C.A: 396.3 km^2	**54..95**	**858**		**258**		**3.25**	**79.0**	**16/09 1968**	**0.57**	**27/07 1956**	**5.4**	**2.45**	**1.30**
M.A: EA	Local No: 3040 Sens.: 10.4 S/full: 37.5m^3s^{-1}													
F.A.R: GE	Level: 48m UE: .02 FAI: 0.969													
Comment: Crump weir (crest: 12m wide) replaced (in 1972) an informal broad-crested structure (incapable of precise flow measurement); differing hydrometric performance reflected in flow records. High flows based on gaugings and estimates of overbank flows; some historical flood discharges are under review. Small net export of water. Topographical catchment exceeds the gw catchment. # A predominantly pervious catchment (Chalk and Upper Greensand). Mainly rural; mixed woodland in the headwaters.		1996	757	88	185	72	2.32	24.7	09/01	1.14	23/09	3.4	1.84	1.24
		1997	727	85	148	57	1.86	13.7	24/02	0.99	22/08	2.8	1.62	1.10
		1998	1011	118	229	89	2.88	21.1	05/01	1.16	29/08	5.1	2.19	1.25
		1999	955	111	246	95	3.09	29.8	25/12	1.25	28/07	5.5	2.25	1.32
		2000	1263	147	373	145	4.68	38.9	30/10	1.53	13/09	8.4	3.04	1.69
039122	**Cranleigh Waters at Bramley** C.A: 109.5 km^2	**90..95**	**775**		**302**		**1.05**	**25.3**	**02/10 1993**	**0.15**	**04/09 1993**	**2.9**	**0.41**	**0.19**
M.A: EA	Local No: Sens.:													
F.A.R:	Level: m UE: FAI:													
Comment: Multi-path cross-configuration ultrasonic gauging station beneath road bridge. Full range station. Flashy response, long periods of very low flow. Low velocities impact on the precision of the flows, but the record is consistent. Low flows influenced by effluent returns. Station is used for flood monitoring purposes. # Rural catchment, predominantly impervious Weald Clay with some Lower Greensand in lower reaches. Situated S of Guildford.		1996	654	84	219	73	0.76	23.2	09/01	0.17	07/09	1.6	0.38	0.19
		1997	696	90	211	70	0.73	12.2	25/02	0.17	25/09	1.9	0.31	0.19
		1998	905	117	333	110	1.16	15.2	01/11	0.13	21/08	3.1	0.48	0.18
		1999	872	113										
		2000	1200	155	626	207	2.17	*102.8*	*05/11*	0.18	14/09	5.0	0.81	0.22
039036	**Law Brook at Albury** C.A: 16.0 km^2	**68..95**	**817**		**215**		**0.11**	**0.8**	**06/08 1981**	**0.05**	**07/06 1993**	**0.1**	**0.11**	**0.07**
M.A: EA	Local No: 3074 Sens.: 20.0 S/full: 0.9m^3s^{-1}													
F.A.R: G	Level: 57m UE: <.01 FAI: 0.961													
Comment: Rectangular thin-plate weir, 2.7m broad. Flood discharges can exceed weir capacity and bypassing occurs on the rb; some leakage below weir plate also suspected to have occurred. The baseflow dominated runoff is diminished by gw abstractions. # Small, relatively steep, rural catchment draining from the Winterfold Forest and Hurtwood; mainly pervious (Upper Greensand) but responsive on occasions.		1996	675	83	149	69	0.08	0.3	08/01	**0.04**	**23/06**	0.1	0.07	0.04
		1997	712	87										
		1998	896	110	167	78	0.08	0.3	09/11	0.06	25/01	0.1	0.08	0.07
		1999	882	108	172	80	0.09	0.5	22/09	0.05?	17/07	0.1	0.08	0.07
		2000	1203	147	218	101	0.11	**0.8**	**05/11**	0.07	09/01	0.2	0.09	0.08
039029	**Tillingbourne at Shalford** C.A: 59.0 km^2	**68..95**	**801**		**289**		**0.54**	**6.1**	**15/09 1968**	**0.22**	**05/08 1992**	**0.7**	**0.50**	**0.32**
M.A: EA	Local No: 3079 Sens.: 13.9													
F.A.R: GIN	Level: 32m UE: <.01 FAI: 0.896													
Comment: Crump weir, 5.5m broad. High flows often overestimated (backing-up from Wey causes drowning, crest-tapping often blocked); some future revision of high flows anticipated. Some artificial flow regulation, but sensibly natural runoff, very minor effect of abstractions and discharges. # Geology: dominated by the Lower Greensand - nominally pervious but catchment is responsive to heavy rainfall. The main valley is broad, but the headwaters drain the North Downs scarp and hilly terrain to the south; land use is primarily agricultural.		1996	663	83	223	77	0.42	1.8	09/01	0.29	16/07	0.5	0.38	0.31
		1997	711	89	191	66	0.36	1.0	25/02	0.24	02/06	0.5	0.34	0.27
		1998	884	110	227	79	0.42	1.4	01/11	0.26	18/08	0.6	0.40	0.28
		1999	862	108	256	89	0.48	2.0	25/12	0.29	15/07	0.7	0.43	0.32
		2000	1186	148	363	126	0.68	2.9	07/11	0.39	25/08	1.1	0.52	0.40
039141	**Wey at Guildford** C.A: 689.6 km^2													
M.A: EA	Local No: Sens.:													
F.A.R:	Level: m UE: FAI:													
Comment: Multi-path ultrasonic gauging station (cross configuration). Installed below a road bridge in the centre of Guilford where the river and navigation channels are coincident. All but extremely rare flows contained.		1996	721											
		1997	715		161		3.52	21.6	25/12	1.67	23/07	6.2	2.80	1.79
		1998	964		237		5.17	30.2	05/01	1.72	18/08	10.1	3.69	1.86
		1999	918		243		5.30	40.1d	25/12	1.77	29/07	10.4	3.75	1.99
		2000	1230					66.7d	07/11					
039079	**Wey at Weybridge** C.A: 1008.0 km^2	**79..95**	**787**		**211**		**6.76**	**74.8**	**29/12 1979**	**1.30**	**12/08 1990**	**12.9**	**4.36**	**2.24**
M.A: EA	Local No: 3090 Sens.:													
F.A.R:	Level: 9m UE: FAI:													
Comment: Ultrasonic gauging station, single-path (Harwell design). Weed-growth and velocity distribution can cause problems but this site does monitor the complete Wey system; confluence with canal is just u/s. U/s storage produces some flood attenuation. # Mixed geology: largely permeable upper catchment (Chalk and Upper Greensand of the North Downs); impermeable Tertiary formations dominate the lower catchment. Diverse land use - rural tracts with mixed woodland; considerable suburban development below the headwaters.		1996	660	84	155	73	4.95	37.2	10/01	1.76	22/07	8.2	3.95	2.01
		1997	681	87				34.3	05/01	1.26	24/07			
		1998	902	115	193	91	6.16	*34.3*	*05/01*	1.85	11/08	12.2	4.27	2.21
		1999	871	111	206	98	6.58	47.6	27/12	1.50	31/07	12.6	4.59	2.11
		2000	1152	146				**83.4**	**07/11**	2.30	13/09			
039054	**Mole at Gatwick Airport** C.A: 31.8 km^2	**61..95**	**816**		**335**		**0.34**	**22.3**	**15/09 1968**	**0.00**	**01/09 1995**	**0.9**	**0.10**	**0.02**
M.A: EA	Local No: 3210 Sens.: 20.0 S/full: 12.3m^3s^{-1}													
F.A.R: PE	Level: 57m UE: FAI:													
Comment: Rectangular flume (2.74m broad) in culvert below airport runway plus Crump weir in new overflow channel (built in 1984, and appears to influence the homogeneity of the flow record). Full range station. Ran dry for the first time in summer of 1995. Very limited disturbance to the responsive, natural flow regime (Gatwick Airport is not in the catchment); small net export of water. # Impervious (Weald Clay) catchment; largely rural.		1996	690	85	217	65	0.22	11.1	09/01	>0.00	21/07	0.4	0.08	0.01
		1997	766	94	218	65	0.22	8.9	09/11	0.01	31/05	0.6	0.05	0.02
		1998	895	110	352	105	0.35	8.1	31/10	0.01	20/08	1.1	0.09	0.02
		1999	821	101	305	91	0.31	14.7	24/12	0.01	28/07	0.8	0.08	0.02
		2000	1206	148										
039086	**Gatwick Stream at Gatwick Link** C.A: 33.6 km^2	**75..95**	**827**		**643**		**0.69**	**25.9**	**12/11 1976**	**0.11**	**15/08 1976**	**1.3**	**0.47**	**0.25**
M.A: EA	Local No: 3229 Sens.: 20.0													
F.A.R: E	Level: 55m UE: .08 FAI: 0.954													
Comment: Crump weir (4.6m broad) with crest-tapping; located at the end of a culvert. Superseded earlier velocity-area station (u/s). Modular apart from exceptional discharges. Flow pattern affected by sewage effluent and urban runoff; large net import to the catchment. # Mixed geology but mainly impervious (Weald Clay). Mixed land use with significant urban and forested areas.		1996	716	87	598	93	0.64	10.6	08/01	0.29	21/07	1.0	0.49	0.30
		1997	829	100	616	96	0.66	8.7	09/11	0.25	03/10	1.3	0.43	0.27
		1998	920	111	756	118	0.81	8.1	31/10	0.20	28/09	1.6	0.57	0.28
		1999	848	103	674	105	0.72	12.8	24/12	0.26	30/07	1.4	0.51	0.28
		2000	1220	148	1126	175	1.20	14.6	05/11	0.29	12/09	2.4	0.70	0.32
039053	**Mole at Horley** C.A: 89.9 km^2	**61..95**	**809**		**452**		**1.29**	**63.3**	**15/09 1968**	**0.11**	**22/08 1976**	**2.6**	**0.70**	**0.25**
M.A: EA	Local No: 3230 Sens.: 13.0 S/full: 26.0m^3s^{-1}													
F.A.R: PE	Level: 52m UE: .09 FAI: 0.947													
Comment: Compound broad-crested weir. Central notch: 2.44m broad plus flanking crests: 10.96m broad, rated section at high flows. Sewage effluent contribution is increasing, also small import of effluent). # Catchment is mainly impermeable (chiefly Weald Clay) with mixed land use and growing urban component - includes Crawley, Gatwick Airport; considerable woodland also.		1996	697	86	444	98	1.26	32.1	09/01	0.39	18/09	2.1	0.82	0.42
		1997	787	97	486	108	1.39	25.5	09/11	0.47	24/09	2.8	0.77	0.50
		1998	890	110	646	143	1.84	27.8	31/10	0.50	14/08	4.0	1.04	0.55
		1999	825	102	560	124	1.60	40.7	24/12	0.31	30/07	3.2	0.89	0.40
		2000	1199	148										

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
039069	**Mole at Kinnersley Manor** C.A: 142.0 km^2	**72..95**	**796**		**463**		**2.08**	**71.9**	**02/10 1993**	**0.12**	**01/09 1976**	**4.3**	**0.98**	**0.31**
M.A: EA	Local No: 3240 Sens.: 19.3													
F.A.R: E	Level: 48m UE: .07 FAI: 0.956													
Comment: Rectangular flume, 7m wide at throat, plus 1.86m rectangular side sluice. Calibration based on current meter gaugings which extend beyond bankfull. Significant net import of water (sewage effluent - increasing through time) but otherwise moderate overall impact of artificial influences. # A largely impervious catchment (mostly Weald Clay). Very mixed land use - rural tracts and urban centres; Crawley and Gatwick Airport are in the catchment.		1996	688	86	396	86	1.78	49.7	09/01	0.42	18/09	3.2	1.04	0.47
		1997	786	99	454	98	2.04	34.8	09/11	0.45	24/07	4.6	0.91	0.52
		1998	866	109	593	128	2.67	40.6	31/10	0.45	19/08	6.5	1.39	0.49
		1999	817	103	528	114	2.38	65.1	24/12	0.34	31/07	4.8	1.17	0.50
		2000	1182	148	973	210	4.37	74.9	06/11	0.55	13/08	11.2	1.90	0.61
039068	**Mole at Castle Mill** C.A: 316.0 km^2	**71..95**	**770**		**362**		**3.63**	**100.0**	**28/12 1979**	**0.45**	**04/09 1972**	**8.4**	**1.77**	**0.76**
M.A: EA	Local No: 3270 Sens.: 19.4													
F.A.R: GE	Level: 39m UE: FAI:													
Comment: Crump weir (15.0m broad) superseded original mill weir (velocity-area rated) in 1978; no dmf data 03/76-01/78. Crump weir is modular to structurefull. All but very high flows contained. Small net import of water (sewage effluent). # Impervious (mostly Weald Clay) catchment. Mixed land use.		1996	675	88	282	78	2.81	72.7	09/01	0.75	22/07	5.4	1.57	0.84
		1997	767	100	309	85	3.10	34.7	09/11	0.74	03/10	7.2	1.41	0.85
		1998	862	112	423	117	4.24	51.6	01/11	0.82	12/08	11.5	2.06	0.90
		1999	824	107	366	101	3.67	70.7	24/12	0.73	25/06	8.3	1.88	0.85
		2000	1184	154	685	189	6.85	86.0	06/11	0.86	14/09	16.0	2.82	0.94
039012	**Hogsmill at Kingston upon Thames** C.A: 69.1 km^2	**56..95**	**676**		**446**		**0.98**	**26.3**	**06/08 1981**	**0.33**	**09/09 1976**	**1.5**	**0.81**	**0.52**
M.A: EA	Local No: 3390 Sens.: 15.4 S/full: 36.0m^3s^{-1}													
F.A.R: E	Level: 6m UE: .21 FAI: 0.993													
Comment: Non-standard flume with bed invert/broad-crested weir, 9.1m broad, situated in a short reach between u/s and d/s bends. Modular to beyond MAF. Responsive regime but sewage effluent - which has increased over time - dominates the dry weather flow; significant imports of water. Flashy response. Some pre-war data available; station relocated following post-war river works. # A largely urban/suburban catchment in SW London developed mainly on London Clay but headwaters are on the Chalk of the North Downs).		1996	526	78	418	94	0.91	8.8	03/11	0.55	10/07	1.2	0.85	0.60
		1997	644	95	416	93	0.91	11.8	08/07	0.58	03/10	1.3	0.81	0.63
		1998	746	110	486	109	1.06	10.2	31/10	0.57	06/08	1.6	0.90	0.63
		1999	714	106	562	126	1.23	16.3	24/09	0.53	05/12	1.8	1.12	0.71
		2000	997	147										
039001	**Thames at Kingston** C.A: 9948.0 km^2	83-95	*718*		**209**		**66.00**	**800.0d**	**18/11 1894**	**0.01**	**09/10 1976**	**161.2**	**41.33**	**8.48**
M.A: EA	Local No: 3400 Sens.: B/full: 450.0m^3s^{-1}													
F.A.R: SRPGEI	Level: 5m UE: .04 FAI: 0.913													
Comment: Ultrasonic station commissioned in 1974; multi-path operation from 1988. Full range. No peak flows pre-1974 when dmfs derived from Teddington weir complex (70m wide); significant structural improvements since 1883. Some underestimation of pre-1951 low flows. 1894 peak gdf re-assessed (800 m^3s^{-1}). Baseflow sustained mainly from the Chalk and the Oolites. Runoff decreased by major PWS abstractions - naturalised flows available. # Diverse topography, geology and land use which - together with the pattern of water utilisation - has undergone important historical changes.		1996	545	76	103	49	32.51	312.0	10/01	2.52	31/12	82.5	10.93	3.71
		1997	640	89	55	26	17.46	181.0	26/02	1.46	04/01	50.2	7.55	3.92
		1998	842	117	203	97	63.91	272.0	06/01	7.56	29/08	158.7	44.52	9.65
		1999	806	112	213	102	67.31	331.3	21/01	7.88	15/07	177.0	45.61	10.21
		2000	973	136	339	162	106.62	462.4	07/11	7.69	14/09	251.1	68.84	11.34
039145	**Yeading Brook East at Western Avenue A40** C.A: 9.6 km^2	95..95	601					3.0	19/12 1995	0.01	09/12 1995			
M.A: EA	Local No: Sens.:													
F.A.R:	Level: m UE: FAI:													
Comment: Flat V weir from 1974, removed in 1981. Replaced in Oct 1985. EA hold records from water year 1988. Rebuilt in 1993, with records from Sep 1993.		1996	469	78	113		0.03	2.8	07/06	0.01	12/09	0.1	0.01	0.01
		1997	520	87	121		0.04	3.8	26/06	0.01	02/06	0.1	0.01	0.01
		1998	753	125	209		0.06	4.0	26/09	0.01	22/08	0.2	0.02	0.01
		1999	718	119	177		0.05	5.4	01/06	0.01	22/06	0.1	0.02	0.01
		2000	927	154	287		0.09	4.4	05/11	0.01	26/06	0.2	0.03	0.01
039057	**Crane at Cranford Park** C.A: 61.7 km^2	**78..95**	**641**		**261**		**0.51**	**18.8**	**08/04 1979**	**0.01**	**16/08 1982**	**1.1**	**0.26**	**0.11**
M.A: EA	Local No: 3660 Sens.: 32.4													
F.A.R:	Level: 23m UE: .35 FAI: 0.998													
Comment: Non-standard critical depth flume improvised from the invert of a footbridge. Straight reach, banks stabilised by timber revetments. Theoretical calibration - gaugings needed to verify rating and determine the modular limit. Pre-84 flows less reliable. Bypassing (lb) occurs above a stage of about 1.3m. Complex water utilisation. Small natural import of water from the Colne catchment. A relatively responsive regime. # A flat, generally impervious (mostly London Clay) catchment of suburban character - includes Northolt Airport.		1996	463	72	152	58	0.30	9.2	08/01	0.08	17/09	0.6	0.18	0.10
		1997	506	79	149	57	0.29	6.5	26/06	0.09	10/09	0.6	0.17	0.10
		1998	738	115	261	100	0.51	10.0	31/10	0.10	23/05	1.2	0.26	0.12
		1999	714	111	251	96	0.49	12.7	02/06	0.09	12/07	1.1	0.22	0.12
		2000	912	142	400	153	0.78	17.9	30/10	0.12	07/08	1.8	0.34	0.15
039094	**Crane at Marsh Farm** C.A: 81.0 km^2	**77..95**	**631**		**209**		**0.54**	**13.4**	**28/12 1979**	**>0.00**	**05/12 1982**	**1.2**	**0.31**	**0.02**
M.A: EA	Local No: 3680 Sens.: 174.0 S/full: 28.0m^3s^{-1}													
F.A.R: G	Level: 7m UE: FAI:													
Comment: Rectangular critical depth flume (insensitive) in a straight concrete channel. Theoretical rating; modular limit to be determined. Capacity approx. 30 m^3s^{-1}; yet to be exceeded. Substantial artificial influence on flow pattern: automatic weir u/s diverts flow into the Duke's River, considerable area of gravel workings; some runoff gain from the Colne catchment. # Very flat - drainage network difficult to delineate. Mainly urban; catchment contains Heathrow Airport and several pumped storage res. (abstracting from Thames).		1996	451	71	101	48	0.26	6.8	09/01	0.01	28/09	0.6	0.13	0.02
		1997	496	79	82	39	0.21	4.8	26/06	>0.00	04/10	0.5	0.11	0.01
		1998	725	115	186	89	0.48	6.8	09/04	>0.00	10/08	1.2	0.24	0.02
		1999	702	111	181	87	0.47	6.8	02/06	>0.00	03/08	1.2	0.25	0.01
		2000	894	142	301	144	0.77	11.9	30/10	**0.00**	**01/08**	2.0	0.43	
039092	**Dollis Brook at Hendon Lane Bridge** C.A: 25.1 km^2	**79..95**	**708**		**288**		**0.23**	**16.4**	**22/09 1992**	**0.00**	**01/10 1989**	**0.5**	**0.09**	**0.03**
M.A: EA	Local No: 3809 Sens.:													
F.A.R:	Level: 46m UE: .25 FAI: 0.990													
Comment: Flat V weir has replaced a compound broad-crested weir with rectangular thin-plate inset (lack of confirmatory gaugings, severe u/s siltation - occasionally moderated by flushing via sluice below weir). # Catchment in NW suburbs of London: Barnet and Hendon but with significant rural tracts in western headwaters. Geology: entirely London Clay of Eocene age. Drift free.		1996	511	72	156	54	0.12	4.0	08/01	0.02	25/09	0.3	0.06	0.03
		1997	558	79	164	57	0.13	6.3	26/06	0.00	01/03	0.3	0.05	0.02
		1998	788	111	271	94	0.22	6.1	31/10	0.03	21/09	0.5	0.09	0.04
		1999	688	97	249	86	0.20	4.4	24/12	0.03	01/08	0.5	0.08	0.03
		2000	896	127	433	150	0.34	14.9	29/10	0.03	20/08	0.8	0.14	0.03
039084	**Brent at Brent Cross** C.A: 36.4 km^2	**89-95**	**671**		**299**		**0.34**	**35.0**	**12/10 1993**	**0.05**	**29/07 1990**	**0.8**	**0.13**	**0.07**
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 41m UE: FAI:													
Comment: Rectangular thin-plate weir with rectangular notch. Limited number of check gaugings, highest at 4.1 m^3s^{-1}; they suggest that calibration overestimates high flows. Debris in channel can be a problem. # Urban/suburban catchment in N/W London.		1996	502	75	208	70	0.24	13.3	08/01	0.07	08/08	0.5	0.13	0.08
		1997	556	83	210	70	0.24	18.6	26/06	0.07	23/09	0.5	0.13	0.08
		1998	786	117	356	119	0.41	15.6	05/01	0.06	22/09	0.9	0.18	0.07
		1999	692	103	298	100	0.34	15.0	22/09	0.06	24/07	0.9	0.15	0.07
		2000	915	136	497	166	0.57	**35.0**	**29/10**	0.06	21/08	1.3	0.26	0.07
039049	**Silk Stream at Colindeep Lane** C.A: 29.0 km^2	**73..95**	**688**		**271**		**0.25**	**17.3**	**05/10 1984**	**0.01**	**04/06 1974**	**0.6**	**0.11**	**0.04**
M.A: EA	Local No: 3829 Sens.: 27.5													
F.A.R:	Level: 40m UE: .30 FAI: 0.973													
Comment: Flat V weir (1:10 cross slope, width: 8.5m). Theoretical rating. Further gaugings needed to establish modular range. Some bypassing during floods; d/s bridge acts as a control in high flows and may cause weir to drown. Poorer quality pre-1973 data available for two earlier stations on the river; significant river improvements undertaken in the 1950s. Responsive regime. Net impact of abstractions and discharges uncertain; artificial influences evident at low flows. # Catchment is largely London Clay. Rural/suburban headwaters, heavily urbanised below.		1996	507	74	175	65	0.16	11.2	11/08	0.05	07/08	0.4	0.09	0.05
		1997	550	80	165	61	0.15	12.3	26/06	0.04	01/06	0.3	0.07	0.04
		1998	780	113	271	100	0.25	5.6	15/06	0.04	08/08	0.6	0.11	0.05
		1999	718	104	263	97	0.24	12.8	01/06	0.05	12/09	0.7	0.10	0.05
		2000	908	132	423	156	0.39	13.9	14/05	0.05	21/08	0.9	0.21	0.05
039096	**Wealdstone Brook at Wembley** C.A: 21.8 km^2	**79..95**	**671**		**216**		**0.15**	**29.2**	**22/09 1992**	**0.00**	**03/04 1982**	**0.3**	**0.06**	**0.02**
M.A: EA	Local No: 3839 Sens.: 39.6													
F.A.R:	Level: 29m UE: .42 FAI: 1.000													
Comment: Flat V profile weir in a culvert (below Olympic Way Wembley). Following modifications to the structure in 1978 it was refurbished but crest is sub-standard and a few gaugings suggest that the theoretical rating may not be applicable especially in high flow range. Data under review (as more confirmatory gaugings required). Responsive regime. # A largely impervious urban/suburban catchment.		1996	488	73	121	56	0.08	11.9	11/08	0.02	12/09	0.2	0.03	0.02
		1997	544	81	120	56	0.08	18.2	26/06	0.01	29/10	0.2	0.03	0.02
		1998	767	114	202	94	0.14	9.2	02/11	0.01	13/08	0.4	0.05	0.02
		1999	716	107	176	81	0.12	14.1	01/06	0.01	15/07	0.3	0.03	0.01
		2000	927	138	307	142	0.21	17.7	14/05	0.01	12/08	0.5	0.07	0.02

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
039093	**Brent at Monks Park** C.A: 117.6 km^2	**78..95**	**691**		**268**		**1.00**	**56.2**	**22/09 1992**	**0.06**	**29/09 1979**	**2.3**	**0.47**	**0.13**
M.A: EA	Local No: 3850 Sens.: 29.2 S/full: 34.0m^3s^{-1}													
F.A.R:	Level: 25m UE: .40 FAI: 0.937													
Comment: Critical depth flume (rectangular) in a concrete channel, d/s of Brent Reservoir. # A largely urban/suburban catchment in NW London.		1996	497	72	186	69	0.69	19.8	08/01	0.15	12/09	1.5	0.39	0.21
		1997	551	80	177	66	0.68	29.5	26/06	0.13	22/04	1.5	0.35	0.17
		1998	780	113	281	105	1.05	22.5	31/10	0.15	18/09	2.7	0.48	0.18
		1999	704	102										
		2000	920	133	409	153	1.52	49.0	29/10	0.15	21/08	3.8	0.70	0.17
039131	**Brent at Costons Lane, Greenford** C.A: 146.2 km^2	**92..95**	**700**		**286**		**1.32**	**42.9**	**12/10 1993**	**0.19**	**03/08 1995**	**3.0**	**0.60**	**0.26**
M.A: EA	Local No: Sens.:													
F.A.R:	Level: m UE: FAI:													
Comment: Flat V weir with vertical wing walls (bankfull: 2 m). Lowest flow recording station on the Brent. Flow does not incorporate the d/s Greenford tributary. Brent reservoir has significant impact on the flow regime. # A largely urban/suburban catchment in NW London, developed on London Clay.		1996	488	70	185	65	0.86	21.6	09/01	0.22	09/05	1.7	0.49	0.27
		1997	543	78	172	60	0.80	24.9	26/06	0.15	20/09	1.7	0.44	0.18
		1998	774	111	274	96	1.27	22.2	31/10	0.15	12/08	3.4	0.62	0.20
		1999	702	100	239	84	1.11	24.7	02/06	0.14	13/09	2.9	0.54	0.18
		2000	920	131	390	136	1.80	52.3	30/10	0.17	24/08	4.5	0.91	0.20
039005	**Beverley Brook at Wimbledon Common** C.A: 43.5 km^2	**35..95**	**636**		**398**		**0.55**	**15.9**	**09/10 1987**	**0.02**	**03/10 1970**	**0.9**	**0.44**	**0.22**
M.A: EA	Local No: 4080 Sens.: 11.5 S/full: 28.3m^3s^{-1}													
F.A.R: GE	Level: 11m UE: .38 FAI: 1.000													
Comment: Trapezoidal critical-depth flume (overall channel width: 10m). Original station built 1935; flume commissioned in 1940 but no standing-wave formed until invert raised in 1961. Large capacity but bypassed during 1968 flood. Artificial flow pattern; runoff augmented by sewage effluent which has increased over the record. Topographic catchment slightly exceeds effective drainage area. # Chalk headwaters but a largely London Clay catchment of urban/suburban character.		1996	475	75	367	92	0.50	8.9	03/11	0.31	09/09	0.7	0.43	0.34
		1997	574	90	387	97	0.53	13.6	06/08	0.32	03/11	0.8	0.43	0.35
		1998	720	113	438	110	0.60	8.7	09/11	0.33	23/07	1.0	0.45	0.36
		1999	679	107	396	99	0.55	13.9	24/09	0.07?	16/10	0.9	0.43	0.29
		2000	940	148	526	132	0.72	15.6	29/10	0.31	27/06	1.3	0.50	0.37
039004	**Wandle at Beddington Park** C.A: 122.0 km^2	**36..95**	**776**		**45**		**0.18**	**8.7f**	**30/11 1976**	**0.00**	**08/04 1973**	**0.3**	**0.14**	**0.01**
M.A: EA	Local No: 4150 Sens.: 120.0 S/full: 13.1m^3s^{-1}													
F.A.R: G	Level: 33m UE: .14 FAI: 0.994													
Comment: Electromagnetic station (buried coil) replaced a compound Crump weir in 1991. Prior to 1964 the station was a very insensitive broad-crested weir (constructed 1939). Historical record poor; uncertain calibration, algal growth on weir, inaccurate zero setting, etc. Hydrometric problems continued into the 1980s. Flows corrected to allow for siltation. Complex water utilisation; substantial gw pumping. Effective drainage area is smaller than topographical catchment. # The Wandle rises in Chalk; London Clay predominates in lower catchment. Suburban/urban land use.		1996	627	81	27	60	0.11	4.7	23/07	0.02	01/11	0.2	0.11	0.03
		1997	736	95	14	31	0.05	5.8	08/07	0.01	22/09	0.1	0.04	0.02
		1998	896	115	43	96	0.17	6.7	01/08	0.07	22/09	0.3	0.15	0.09
		1999	820	106	44	98	0.17	5.2	29/05	0.06	28/11	0.3	0.18	0.07
		2000	1118	144	71	158	0.27	4.4	02/11	0.08	30/01	0.6	0.20	0.10
039003	**Wandle at Connollys Mill** C.A: 176.1 km^2	**62..95**	**732**		**304**		**1.70**	**39.3f**	**16/09 1968**	**0.22**	**29/01 1963**	**2.8**	**1.72**	**0.70**
M.A: EA	Local No: 4180 Sens.: 9.2 S/full: 28.0m^3s^{-1}													
F.A.R: GE	Level: 10m UE: .20 FAI: 0.987													
Comment: Rectangular critical-depth flume (5.5m wide). Theoretical calibration. Drowns (and bypassed) during notable floods. Superseded (following channel improvements) Wandle Park immediately u/s (sporadic data available 1939-60). Very artificial flow pattern; runoff enhanced by sewage effluent. Large baseflow component. Topographic catchment substantially exceeds effective drainage area. # The Wandle is spring-fed (Chalk) but catchment is largely London Clay. Urban/suburban with significant areas of parkland.		1996	592	81	274	90	1.52	11.7	03/11	1.07	22/10	1.9	1.46	1.14
		1997	693	95	244	80	1.36	12.4	09/10	1.03	24/09	1.7	1.23	1.08
		1998	854	117	348	114	1.94	16.4	15/06	1.43	18/09	2.6	1.76	1.53
		1999	788	108										
		2000	1071	146	548	180	3.05	25.2	29/10	1.51	14/09	5.6	2.38	1.64
039134	**Ravensbourne East at Bromley South** C.A: 10.3 km^2	**93..95**	**700**		**168**		**0.05**	**6.9**	**10/08 1994**	**0.01**	**02/11 1995**	**0.1**	**0.02**	**0.01**
M.A: EA	Local No: Sens.:													
F.A.R:	Level: m UE: FAI:													
Comment: Flat V weir (1:10 cross slope) with vertical wing walls. Full range station, which has been theoretically rated. Straight approach with no significant modification to flow regime. # The Ravensbourne rises as Chalk springs (in Holwood Park; dry valleys extend into the North Downs). The lower catchment is mainly impervious Eocene deposits. Below the headwaters the catchment is largely within London.		1996	510	73	101	60	0.03	3.6	22/08	0.01	14/05	0.1	0.02	0.01
		1997	592	85	112	67	0.04	5.4	09/10	0.01	16/09	0.1	0.02	0.01
		1998	768	110	152	90	0.05	4.3	01/08	0.01	13/08	0.1	0.02	0.01
		1999	720	103										
		2000	994	142	227	135	0.07	5.1	15/09	0.01	15/07	0.2	0.03	0.01
039058	**Pool at Winsford Road** C.A: 38.3 km^2	**78..95**	**661**		**244**		**0.30**	**21.7**	**27/02 1979**	**0.06**	**12/09 1978**	**0.6**	**0.21**	**0.11**
M.A: EA	Local No: 4369 Sens.: 24.9													
F.A.R: G	Level: 17m UE: .43 FAI: 0.985													
Comment: Trapezoidal flume; breadth at the critical section: 3.05m. Full range. Theoretical calibration. Flows reprocessed from Jan 1985. Runoff is reduced by gw abstractions and artificial influences evident at low flows. Some earlier data (1961-71) exist for an u/s site - Selworthy Road (39827). # The Pool River rises as Chalk springs (below Addington Hill) but flows mostly over impervious Eocene deposits. Land use: principally of a suburban/urban character (S London).		1996	481	73	186	76	0.22	9.1	22/08	0.05	05/08	0.3	0.18	0.10
		1997	569	86	189	77	0.23	9.9	09/10	0.10	15/09	0.4	0.18	0.11
		1998	769	116	246	101	0.30	14.5	01/08	0.09	10/08	0.6	0.20	0.11
		1999	698	106	204	84	0.25	8.9	04/08	0.02	18/09	0.5	0.17	0.05
		2000	944	143	312	128	0.38	10.2	09/10	0.07	23/06	0.8	0.22	0.10
039056	**Ravensbourne at Catford Hill** C.A: 120.4 km^2	**77..95**	**718**		**114**		**0.43**	**28.4**	**09/06 1992**	**0.09**	**23/05 1992**	**0.8**	**0.31**	**0.14**
M.A: EA	Local No: 4370 Sens.: 19.9													
F.A.R: G	Level: 15m UE: .26 FAI: 0.993													
Comment: Trapezoidal flume; breadth at the critical section: 4.267m; insensitive. Full range. Theoretical calibration - confirmatory gaugings required at medium and high flows. Flows reprocessed from Jan 1985. Artificial influences evident at low flows. Regime heavily affected by urbanisation. # The Ravensbourne rises as Chalk springs (in Holwood Park; dry valleys extend into the North Downs). The lower catchment is mainly impervious Eocene deposits. Below the headwaters the catchment is largely within London.		1996	553	77	87	76	0.33	12.3	22/08	0.06	05/08	0.6	0.24	0.10
		1997	637	89	77	68	0.29	15.2	22/06	0.10	15/09	0.5	0.18	0.12
		1998	830	116	101	89	0.39	16.3	01/08	0.09	01/09	0.8	0.22	0.10
		1999	748	104	95	83	0.36	12.4	04/08	0.07	12/09	0.8	0.22	0.09
		2000	1041	145	145	127	0.55	17.4	15/09	0.09	07/09	1.2	0.29	0.12
039135	**Quaggy River at Chinbrook Meadows** C.A: 14.5 km^2	**92..95**	**708**		**237**		**0.11**	**2.7**	**02/10 1993**	**0.02**	**02/08 1993**	**0.2**	**0.08**	**0.03**
M.A: EA	Local No: Sens.:													
F.A.R:	Level: m UE: FAI:													
Comment: Rectangular critical depth flume. Flood walls added May 1982. Station subject to considerable gravel accretion. Sensibly continuous flow record. No significant modifications to flow regime. # Geology: London Clay, also Reading/Woolwich Beds. An urban/suburban catchment in S London.		1996	506	71	131	55	0.06	1.5	22/08	0.01	17/08	0.1	0.05	0.02
		1997	588	83	135	57	0.06	2.0	24/02	0.01	16/09	0.1	0.04	0.02
		1998	753	106	177	75	0.08	1.4	05/01	0.02	29/08	0.2	0.05	0.02
		1999	703	99	126	53	0.06	1.5	24/09	>0.00	21/07	0.1	0.03	0.01
		2000	977	138	257	108	0.12	3.0	30/10	0.02	04/09	0.2	0.06	0.02
039095	**Quaggy at Manor House Gardens** C.A: 33.5 km^2	**78..95**	**647**		**144**		**0.15**	**7.8**	**09/06 1992**	**0.02**	**08/09 1984**	**0.3**	**0.09**	**0.04**
M.A: EA	Local No: 4389 Sens.: 40.8 S/full: 8.0m^3s^{-1}													
F.A.R:	Level: 13m UE: .37 FAI: 1.000													
Comment: A critical depth flume (width: 4m, wing wall height: 2m) in a concrete channel. The flume was constructed in 1961 and calibrated theoretically - the low flow rating has since been revised on the basis of c/m gauging results. Modular range uncertain. The structure was overwhelmed by the 1968 flood but sensibly full range otherwise. # The catchment is a mixture of urban and suburban development.		1996	482	74	91	63	0.10	3.7	19/11	0.03	25/09	0.2	0.06	0.03
		1997	554	86	94	65	0.10	4.9	24/02	0.02	03/10	0.2	0.05	0.02
		1998	714	110	136	94	0.14	3.5	26/09	0.03	19/08	0.3	0.08	0.03
		1999	664	103	111	77	0.12	3.7	29/05	0.01	13/09	0.3	0.07	0.02
		2000	919	142	215	149	0.23	5.6	09/10	0.03	25/08	0.5	0.12	0.04

Map 8: SOUTHERN



Area: 10,604 km^2

Average Rainfall (1961–90): 776 mm

Gauging Station Register

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
040016	Cray	Crayford	TQ 511746	119.7	CC	1969..00	693	130	563	**211**	**00**	33	73	0.49	0.07	08/76	8.2	.71	0.9	0.11
040013	Darent	Otford	TQ 525584	100.5	CC	1969..00	774	186	588	**460**	**00**	80	73	0.59	0.09	09/91		.57	1.1	0.12
040018	Darent	Lullingstone	TQ 530643	118.4	B	1969..00	763	176	587	**351**	**00**	61	73	0.66	0.06	08/76	3.3	.73	1.3	0.15
040012	Darent	Hawley	TQ 551718	191.4	C	1963–00	738	100	638	**198**	**00**	17	73	**0.61**	0.00	10/76	2.7	.72	1.3	0.02
040001 *	Medway	Weir Wood Res	TQ 407353	26.9	FL	1953–67	906	195	711	312	58	88	65	0.17	0.04	03/62		.43	0.4	0.04
040020	Eridge Stream	Hendal Bridge	TQ 522367	53.7	FV	1973..00	884	427	457	**763**	**00**	**274**	**96**	0.73	0.06	08/76	30.3	.44	1.6	0.09
040007	Medway	Chafford Weir	TQ 517405	255.1	FL	1960..00	867	381	486	**626**	**00**	161	73	3.08	0.43	08/76	46.2	.49	6.3	0.52
040010	Eden	Penshurst	TQ 520437	224.3	C VA	1961..00	766	261	505	**513**	**00**	**114**	73	1.85	0.18	07/76	28.1	.37	4.1	0.23
040006	Bourne	Hadlow	TQ 632497	50.3	FL	1959..00	731	238	493	322	60	**152**	**96**	0.38	**0.10**	**07/97**	6.8	.63	0.7	0.14
040024 *	Bartley St	Bartley Mill	TQ 633357	25.1	B	1974..81	908	452	456	456	79	386	78	0.36	0.04	08/76		.49	0.7	0.05
040009	Teise	Stone Bridge	TQ 718399	136.2	FV	1961..00	814	310	504	**572**	**00**	129	73	1.34	0.10	08/76	29.5	.48	2.6	0.20
040005	Beult	Stile Bridge	TQ 758478	277.1	MIS	1958..00	703	234	469	**511**	**00**	**91**	**96**	2.06	>0.00	08/76	38.8	.24	5.8	0.07
040003	Medway	Teston	TQ 708530	1256.1	MIS	1956..00	762	278	484	**562**	**00**	**150**	**96**	11.09	0.58	08/76	130.2	.41	24.8	1.51
040029	Len	Lenside	TQ 765556	69.7	FV	1984..00	710	304	406	424	94	**197**	**96**	0.67	**0.23**	**12/96**		.70	1.1	0.31
040015	White Drain	Fairbrook Farm	TR 055606	31.8	FL	1969..00	696	46	650	91	87	19	73	0.05	**>0.00**	**09/97**		.51	0.1	0.01
040023	East Stour	S Willesborough	TR 015407	58.8	FV	1976..00	772	392	380	**653**	**00**	251	90	0.73	0.01	05/76		.43	1.9	0.06
040008	Great Stour	Wye	TR 049470	230.0	C VA	1962..00	741	303	438	475	66	166	73	2.21	0.34	07/76	23.0	.58	4.6	0.52
040011	Great Stour	Horton	TR 116554	345.0	B VA	1964..00	760	289	471	**483**	**00**	**151**	**96**	3.16	**0.83**	**09/97**	20.2	.70	6.0	1.02
040027 *	Same Penn	Calcott	TR 174625	19.4	FV	1975..94	631	150	481	164	93	68	89	0.09	>0.00	08/90		.35	0.2	>0.00
040014 *	Wingham	Durlock	TR 276576	37.7	VN	1971..96	699	17	682	25	89	8	85	0.02	**>0.00**	**07/96**		.60	0.0	
040033	Dour	Crabble Mill	TR 300430	49.5	FV	1976..00	884	273	611	503	94	**66**	**96**	0.43	0.03	11/90		.96	0.9	0.05
040017	Dudwell	Burwash	TQ 679240	27.5	C	1971..00	917	357	560	**712**	**00**	158	73	0.31	**0.03**	**09/97**	29.3	.45	0.6	0.04
040002 *	Darwell	Darwell Res	TQ 722213	9.6	TPFL	1956..75	943	66	877	342	60	20	71	0.02	>0.00	12/71		.42	0.0	>0.00
040004	Rother	Udiam	TQ 773245	206.0	FV	1962..00	876	335	541	**772**	**00**	107	73	2.19	0.12	10/89	41.9	.35	5.5	0.17
040021	Hexden Ch	Sandhurst	TQ 813290	32.4	FL	1975..00	803	311	492	**612**	**00**	155	**96**	0.32	0.01	08/76		.45	0.8	0.03
041017	Combe Haven	Crowhurst	TQ 765102	30.7	CC	1969..00	803	339	464	657	94	101	73	0.33	0.01	09/90		.41	0.7	0.02
041001	Nunningham	Tilley Bridge	TQ 662129	16.9	TPFL	1950..00	842	345	497	**888**	**00**	99	73	0.19	**0.01**	**09/96**		.36	0.4	0.01
041002	Ash Bourne	Hammer Wd Br	TQ 684141	18.4	TPFL	1951..00	870	406	464	**674**	**00**	**168**	**96**	0.24	**0.02**	**05/97**		.50	0.6	0.04
041013	Huggletts St	Henley Bridge	TQ 671138	14.2	TPFL	1950..99	839	331	508	557	60	100	73	0.15	**0.01**	**09/97**		.37	0.3	0.02
041016	Cuckmere	Cowbeech	TQ 611150	18.7	CC	1939..00	883	358	525	**872**	**00**	84	73	0.21	0.01	08/76	5.4	.40	0.5	0.01
041029	Bull	Lealands	TQ 575131	40.8	FV	1978–00	857	359	498	**728**	**00**	**153**	**96**	0.47	0.01	08/95		.39	1.1	0.03
041003	Cuckmere	Sherman Bridge	TQ 533051	134.7	FVVA	1959..00	838	319	519	691	60	105	73	1.36	0.02	08/76	32.5	.28	3.2	0.07
041024	Shell Brook	Shell Brook	TQ 335286	22.6	FV	1971..00	880	346	534	**638**	**00**	181	78	0.25	0.01	12/95		.51	0.5	0.01
041026	Cockhaise Brk	Holywell	TQ 376262	36.1	C	1971..99	849	342	507	511	74	136	73	0.39	0.02	09/90	10.0	.52	0.9	0.05
041005	Ouse	Gold Bridge	TQ 429214	180.9	FVVA	1960..00	872	387	485	**721**	**00**	163	73	2.22	0.16	08/76	30.7	.51	4.9	0.32
041006	Uck	Isfield	TQ 459190	87.8	FV	1964..00	844	420	424	**890**	**00**	172	73	1.17	0.11	08/76	32.2	.40	2.3	0.17
041021	Clayhill St	Old Ship	TQ 448153	7.1	C	1969..99	799	360	439	591	74	107	73	0.08	**0.00**	**04/97**	3.7	.15	0.2	
041020	Bevern St	Clappers Bridge	TQ 423161	34.6	C	1969..00	897	430	467	**912**	**00**	156	73	0.47	0.01	09/90	12.1	.28	1.2	0.02
041004	Ouse	Barcombe Mills	TQ 433148	395.7	US	1956..00	842	321	521	652	60	123	73	4.03	0.14	08/76		.43	9.2	0.32
041037	Winterbourne St	Lewes	TQ 403096	17.3	CC	1966..00	933	190	743	**835**	**00**		**96**	0.10	**0.00**	**09/00**		.60	0.3	
041012	Adur East	Sakeham	TQ 219190	93.3	CC	1967..99	833	401	432	580	74	162	73	1.19	0.08	08/76	21.0	.37	2.7	0.15
041028	Chess Stream	Chess Bridge	TQ 217173	24.0	TPFL	1964..00	865	371	494	671	74	113	73	0.28	0.01	08/73	7.0	.38	0.7	0.02
041010	Adur West	Hatterell Bridge	TQ 178197	109.1	MIS	1961..00	804	310	494	**1119**	**00**	**140**	**96**	1.07	**0.01**	**09/96**		.25	3.1	0.03
041031 *	Fulking Stream	Fulking	TQ 247113	1.0	VN	1968..98	883	378	505	473	81	189	73	0.01	0.00	10/90		.91	0.0	>0.00
041035	North	Brookhurst	TQ 130325	53.9	FV	1983..00	815	341	474	**727**	**00**	**198**	**97**	0.58	>0.00	08/95		.23	1.4	
041019	Arun	Alfoldean	TQ 117331	139.0	CC	1970..00	808	394	414	645	74	134	73	1.74	0.08	08/76		.31	4.1	0.15
041025	Loxwood St	Drungewick	TQ 060309	91.6	CC	1971..00	825	385	440	**897**	**00**	107	73	1.12	0.01	08/95	35.0	.23	2.5	0.04
041018	Kird	Tanyards	TQ 044256	66.8	C	1969..00	808	401	407	**1070**	**00**	89	73	0.85	0.00	08/90	20.0	.17	1.9	
041014	Arun	Pallingham Quay	TQ 047229	379.0	FV	1970..00	796	323	473	**717**	**00**	111	73	3.88	0.20	08/95	70.9	.30	9.9	0.29
041027	Rother	Princes Marsh	SU 772270	37.2	C	1972..00	908	428	480	**837**	**00**	244	73	0.50	0.11	08/76	11.6	.60	0.9	0.14
041011	Rother	Iping Mill	SU 852229	154.0	CC	1966..00	940	452	488	**858**	**00**	204	73	2.21	0.41	08/76	35.2	.61	4.5	0.60
041033	Costers Brook	Cocking	SU 880174	2.7	FVVA	1973..99	1004	689	315	1028	94	409	92	0.06	>0.00	10/89		.89	0.1	0.01
041022	Lod	Halfway Bridge	SU 931223	52.0	C	1970..00	880	349	531	516	74	148	73	0.57	0.01	08/76	17.0	.36	1.4	0.05
041009	Rother	Hardham	TQ 034178	345.8	CC	1959..00	942	461	481	750	60	226	73	5.05	1.15	08/76		.62	10.3	1.73
041023	Lavant	Graylingwell	SU 871064	87.2	FV	1970..00	956	105	851	**353**	**00**	0	**96**	0.29	**0.00**	**09/00**	1.2	.86	0.9	
041034 *	Ems	Walderton	SU 786104	41.5	C	1966..84	943	56	887	146	69	0	73	0.07	0.00	12/83		.87	0.2	
041015	Ems	Westbourne	SU 755074	58.3	CC	1967..00	931	239	692	**631**	**00**	39	92	0.44	0.01	10/69	1.7	.92	1.2	0.01
042025	Lavant Stream	Leigh Park	SU 721072	54.5	VA	1981..99	918	30	888	**57**	**98**	**11**	**96**	0.05	>0.00	10/95		.44	0.1	>0.00
042017	Hermitage	Havant	SU 711067	17.0	VA	1987..00	834	544	290	**1020**	**00**	**273**	**96**	0.29	0.05	07/90	7.8	.48	0.7	0.04
042001	Wallington	North Fareham	SU 587075	111.0	FV	1951..00	855	178	677	376	60	50	73	0.62	0.02	08/76	15.1	.41	1.6	0.04
042006	Meon	Mislingford	SU 589141	72.8	FL	1958–00	930	419	511	785	60	145	73	0.97	0.07	08/76	2.7	.93	2.0	0.20
042011	Hamble	Frogmill	SU 523149	56.6	C	1972..00	882	235	647	**363**	**00**	80	73	0.42	0.05	09/89	8.5	.67	0.8	0.10
042009	Candover St	Borough Bridge	SU 568323	71.2	C	1970–99	825	233	592	293	95	135	92	0.52	0.22	07/92	1.0	.96	0.8	0.27
042007	Alre	Alresford	SU 574326	57.0	C	1970..99	873	855	18	1085	95	**442**	**98**	1.55	**0.55**	**09/98**	2.3	.98	2.1	1.03
042008	Cheriton St	Sewards Bridge	SU 574323	75.1	C	1970–00	909	268	641	**481**	**00**	158	92	0.64	0.17	08/76	1.3	.97	1.0	0.27
042016	Itchen	Easton	SU 512325	236.8	EM	1975..00	871	562	309	**762**	**00**	384	92	4.22	2.30	07/92		.98	6.0	2.66
042010	Itchen	Highbridge	SU 467213	360.0	C+TP	1958–00	855	465	390	**670**	**00**	317	92	5.30	2.33	08/76	8.8	.96	7.8	2.92
042018	Monks Brook	Stoneham Lane	SU 443179	43.3	FV	1987–00	823	169	654	**277**	**00**	105	91	0.23	0.02	08/91		.41	0.6	0.02
042023	Itchen	Riverside Park	SU 445154	415.0	US	1982..99	837	410	427	515	94	321	91	5.40	1.94	08/95		.92	8.8	2.83
042019	Tanners Brook	Millbrook	SU 388133	16.0	VA	1977..99	814	331	483	443	84	158	91	0.17	0.01	09/91		.69	0.3	0.03
042015 *	Dever	Weston Colley	SU 496394	52.7	MIS	1979..95	774	60	714	92	82	39	89	0.10	0.00	08/92		.96	0.2	0.03
042024	Test	Chilbolton (Total)	SU 386394	453.0	EM	1989..00	836	379	457	484	94	**253**	**97**	5.45	**2.37**	**09/97**		.97	8.4	2.89
042012	Anton	Fullerton	SU 379393	185.0	C	1975–99	783	311	472	414	94	172	76	1.82	0.55	08/76	3.5	.96	2.7	0.95
042005	Wallop Brook	Broughton	SU 311330	53.6	TP	1955..99	803	208	595	482	60	63	76	0.35	0.00	11/90	1.0	.94	0.8	0.02
042020	Tadburn Lake	Romsey	SU 362212	19.0	VA	1977..99	809	473	336	1223	90	151	83	0.28	0.02	11/78		.78	0.6	0.04
042004	Test	Broadlands	SU 354189	1040.0	VA	1957..00	819	334	485	487	61	200	76	11.01	3.71	07/76		.94	16.7	5.76
042014	Blackwater	Ower	SU 328174	104.7	C VA	1976–99	865	255	610	341	79	**156**	**97**	0.85	0.12	08/89	17.8	.51	2.1	0.15
042003	Lymington	Brockenhurst	SU 318019	98.9	MIS	1960..00	862	327	535	**591**	**00**	130	73	1.02	0.01	07/62		.36	2.7	0.05
101005	Eastern Yar	Budbridge	SZ 531835	22.5	FV	1982..00	835	300	535	**470**	**00**	226	83	0.21	**0.05**	**09/97**		.62	0.4	0.07

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
101006 *	Wroxall St	Waightshale	SZ 536839	15.8	FV	1982..95	789	249	540	369	88	152	85	0.12	0.03	06/92		.54	0.2	0.04
101001 *	Eastern Yar	Alverstone Mill	SZ 577857	57.5	TP	1961–97	860	260	600	311	75	164	73	0.47	**0.06**	**09/97**		.59	0.9	0.13
101007 *	Scotchells Brk	Burnt House	SZ 583852	9.2	FV	1982..96	836	562	274	1059	93	247	84	0.16	0.01	08/95		.25	0.3	0.01
101004	Eastern Yar	Burnt House	SZ 583853	59.6	FV	1982–99	831	214	617	371	94	123	89	0.41	0.01	08/84		.48	0.8	0.04
101002	Medina	Upper Shide	SZ 504881	29.8	US	1965..00	857	288	569	452	94	129	73	0.27	0.04	08/76		.63	0.5	0.08
101003	Lukely Brook	Newport	SZ 491886	16.2	CC	1980..99	862	202	660	419	94	72	92	0.10	**>0.00**	**08/99**		.82	0.3	0.01

Hydrometric Statistics

			Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
040016	**Cray at Crayford**	C.A: 119.7 km^2	**69..95**	**685**		**131**		**0.50**	**32.5**	**27/08 1977**	**>0.00**	**14/09 1973**	**0.9**	**0.44**	**0.11**
M.A: EA	Local No: 451220001	Sens.: 27.8													
F.A.R: G	Level: 6m	UE: .18	FAI: 0.946												
Comment: Asymmetrical compound Crump profile weir (crests: 3.048m and 7.62m broad). Modular limit about 9 m^3s^{-1}. Correction for drowing discontinued (probably around 1990). Flows are substantially affected by artificial influences; surface and gw abstractions, stormwater overflows and extensive local gravel workings. Considerable net export of water. # A mainly pervious (Chalk) catchment. Urban land use is significant and increasing.			1996	549	80	96	73	0.36	8.8	22/08	0.12	27/09	0.5	0.34	0.15
			1997	624	91	56	43	0.21	5.9	*24/02*	0.05	01/10	0.4	0.15	0.06
			1998	775	113	106	81	0.40	4.2	31/10	0.16	24/09	0.7	0.33	0.18
			1999	720	105	142	108	0.54	7.9	05/07	0.22	02/09	0.8	0.49	0.28
			2000	1034	151	211	161	0.80	11.6	30/10	0.34	26/01	1.3	0.60	0.38
040013	**Darent at Otford**	C.A: 100.5 km^2	**69..95**	**765**		**178**		**0.57**	**14.9**	**25/11 1992**	**0.05**	**20/09 1991**	**1.0**	**0.36**	**0.11**
M.A: EA	Local No: 451332001	Sens.: 20.0	S/full: 9.0m^3s^{-1}												
F.A.R: G	Level: 60m	UE:	FAI:												
Comment: Compound Crump weir (crests: 3.04m and 2 x 2.286m broad) with crest tapping. Superseded original VA station in 1969. Modular rating only (gaugings indicate overestimation at high flows). Station bypassed during floods and u/s accretion/bank encroachment is significant. Upstream g/w abstractions, which showed a substantial historical increase, have been reduced to help increase flows during dry periods. # A mainly pervious (Chalk) catchment with considerable areas of Gault and Lower Greensand u/s of station. Predominantly rural with some expanding urban centres.			1996	627	82	122	69	0.39	6.5	08/01	0.07	03/10	0.7	0.28	0.11
			1997	728	95	114	64	0.36	4.3	09/11	0.10	25/09	0.8	0.26	0.12
			1998	792	104	249	140	0.79	8.0	31/10	0.14	31/08	1.4	0.58	0.23
			1999	776	101	216	121	0.69	13.1	24/12	0.17	01/08	1.2	0.46	0.21
			2000	1209	158	461	259	1.47	**15.9**	**30/10**	0.20	27/08	3.2	0.71	0.29
040018	**Darent at Lullingstone**	C.A: 118.4 km^2	**69..95**	**754**		**172**		**0.64**	**6.7**	**26/12 1985**	**0.01**	**14/07 1976**	**1.3**	**0.53**	**0.15**
M.A: EA	Local No: 451320001	Sens.: 38.0	S/full: 5.3m^3s^{-1}												
F.A.R: G	Level: 44m	UE: .04	FAI: 0.868												
Comment: Broad-crested weir (total crest width: 11m) at outfall of an ornamental lake; stop boards fitted, in the past, to increase low flow sensitivity. Calibration based on gaugings. Baseflows were diminished by major gw abstractions, but Augmentation Scheme now operates (borehole u/s); Darent is influent d/s. Some water meadows u/s (e.g. at Shoreham); sewage outflows from Sevenoaks now piped direct to Dartford. # Catchment is predominantly pervious (Chalk). Mixed land use: agricultural with woodland plus expanding urban centres in the headwaters (including Sevenoaks).			1996	621	82	114	66	0.43	2.8	09/01	0.06	04/10	0.8	0.38	0.10
			1997	723	96										
			1998	782	104	230	134	0.86	2.9	*01/11*	0.26	01/09	1.5	0.76	0.31
			1999	770	102	214	124	0.80	3.6	25/12	0.29	02/08	1.4	0.64	0.32
			2000	1196	159	352	205	1.32	4.9	30/10	0.41	12/09	2.3	1.05	0.49
040012	**Darent at Hawley**	C.A: 191.4 km^2	**63..95**	**732**		**99**		**0.60**	**13.1**	**15/05 1982**	**0.00**	**01/11 1976**	**1.3**	**0.47**	**0.02**
M.A: EA	Local No: 451321001	Sens.: 85.0	S/full: 27.0m^3s^{-1}												
F.A.R: G	Level: 11m	UE: .04	FAI: 0.882												
Comment: Crump weir (7.62m broad). Crest width may be restricted during periods of low flow to increase sensitivity. Station is bypassed in exceptional floods. Influent u/s. Sluices and abstractions to and returns from gravel workings u/s affect flow - evident at low flow (e.g. Oct 1989). Baseflows were greatly reduced by increasing gw abstractions, but the Darent Augmentation Scheme (in the ALF programme) now operates. # A mainly pervious (Chalk and Upper Greensand) catchment with some sand/clay; predominately rural with some expanding urban centres.			1996	582	80	62	63	0.37	2.4	09/01	0.01	31/10	0.8	0.27	0.06
			1997	687	94	41	41	0.25	1.4	18/12	0.01	23/10	0.6	0.19	0.05
			1998	754	103	120	121	0.73	2.5	05/01	0.18	19/07	1.4	0.62	0.23
			1999	738	101	112	113	0.68	3.2	26/12	0.14	19/07	1.4	0.49	0.20
			2000	1127	154	199	201	1.20	5.3	14/12	0.25	12/09	2.4	0.85	0.33
040020	**Eridge Stream at Hendal Bridge**	C.A: 53.7 km^2	**73..95**	**870**		**423**		**0.72**	**34.1f**	**21/11 1974**	**0.05**	**27/08 1976**	**1.6**	**0.34**	**0.10**
M.A: EA	Local No: 453520001	Sens.: 20.2	S/full: 2.2m^3s^{-1}												
F.A.R: E	Level: 42m	UE: .03	FAI: 0.974												
Comment: Flat V weir superseded velocity-area station (data: 1973-83) . Theoretically rated, high flow rating not defined. Many peaks truncated at around 17 m^3s^{-1} (common in late-2000). Chart recorder only. Runoff increased by effluent returns. # Catchment drains Wealden area of Sussex/ Kent, encompassing Hastings Beds, Tunbridge Wells Sand, Wadhurst Clay and Ashdown Beds. Rural, mainly agricultural land use.			1996	706	81	275	65	0.47	16.8	24/11	0.07	06/08	1.0	0.25	0.08
			1997	918	106	357	84	0.61	15.4	24/02	0.08	17/09	1.5	0.22	0.09
			1998	898	103	467	110	0.80	16.9	25/12	0.09	13/08	1.6	0.43	0.10
			1999	876	101	333	79	0.57	17.1	19/01	0.06	08/09	1.3	0.27	0.08
			2000	1363	157	766	181	1.30	17.1	12/10	0.09	12/09	3.4	0.53	0.11
040007	**Medway at Chafford Weir**	C.A: 255.1 km^2	**60..95**	**859**		**385**		**3.11**	**127.4**	**03/11 1960**	**0.28**	**01/10 1973**	**6.2**	**1.49**	**0.53**
M.A: EA	Local No: 453500001	Sens.: 10.2	B/full: 60.0m^3s^{-1}												
F.A.R: SE	Level: 31m	UE: .02	FAI: 0.939												
Comment: Humped trapezoidal flume (capacity 8.5 m^3s^{-1}) plus rated section 0.8km d/s at Colliers Land Bridge; gaugings above bankfull included in the calibration. Channel subject to erosion. Catchment includes Weir Wood Res. (which provides compensation flows). Small net export. Sluices u/s can influence levels. Quite a responsive regime despite significant baseflow. # Geology: mixed but mainly Ashdown Sands and Wadhurst Clay. The Medway drains from Ashdown Forest and the catchment is predominately rural in character.			1996	690	80	219	57	1.76	46.2	09/01	0.29?	23/10	2.8	1.04	0.37
			1997	888	103	265	69	2.14	28.6	25/02	0.32?	02/05	5.6	0.94	0.49
			1998	881	103	358	93	2.89					7.0	1.89	0.61
			1999	835	97	307	80	2.48	87.2	11/05	0.49?	12/09	5.5	1.30	0.54
			2000	1294	151	628	163	5.06	88.1	05/11	0.47	29/08	9.7	2.31	0.60
040010	**Eden at Penshurst**	C.A: 224.3 km^2	**61..95**	**760**		**260**		**1.85**	**64.4**	**11/02 1974**	**0.03**	**14/09 1962**	**4.1**	**0.74**	**0.24**
M.A: EA	Local No: 453600001	Sens.: 18.3	B/full: 60.0m^3s^{-1}												
F.A.R: SE	Level: 28m	UE: .02	FAI: 0.925												
Comment: Crump profile weir (crest width: 4.877m), measures flows up to approx. 4 m^3s^{-1} complemented by VA station in straight reach below Vexour Bridge (3km u/s NGR: TQ510455). Post-1995 flows combined but combination of earlier dmfs is patchy. Rating well defined and all but exceptional flows contained. Offtake for Bough Beech Reservoir is u/s - small net export of water. Also some slight regulation afforded by Hever Lake. # A rural catchment developed on sands and clays of the Wealden Series - impervious types predominate.			1996	631	83	144	55	1.02	20.4	09/01	0.10	20/08	2.1	0.49	0.21
			1997	745	98	156	60	1.11	18.2	16/12	0.07	03/03	3.0	0.51	0.22
			1998	794	104	285	110	2.02	29.7	01/11	0.10?	05/10	4.7	0.70	0.22
			1999	756	99	227	87	1.61	56.0	25/12	0.17	14/09	3.6	0.53	0.22
			2000	1145	151	514	198	3.65	**81.6**	**30/10**	0.24	25/08	8.6	1.37	0.28
040006	**Bourne at Hadlow**	C.A: 50.3 km^2	**59..95**	**725**		**241**		**0.38**	**14.7**	**01/08 1991**	**0.07**	**17/08 1976**	**0.7**	**0.26**	**0.14**
M.A: EA	Local No: 453310001	Sens.: 9.6	S/full: 12.7m^3s^{-1}												
F.A.R: E	Level: 24m	UE: .02	FAI: 0.969												
Comment: Trapezoidal critical depth flume. Some confirmatory gaugings. Drowns at high flows - flow record often incomplete (F&M restrictions in spring 2001). Largely a baseflow regime but capable of a flashy response. Some artificial regulation from a mill u/s. Significant spray irrigation. # A largely rural catchment (with a substantial acreage devoted to orchards) developed on a very mixed geology - pervious formations cover a little over half the catchment.			1996	570	79	153	63	0.24	5.6	09/01	0.10	24/07	0.4	0.18	0.12
			1997	725	100										
			1998	755	104	281	117	0.45	12.6	17/10	0.13	12/08	0.9	0.24	0.15
			1999	701	97	241	100	0.38	14.1	24/12	0.11	03/08	0.6	0.25	0.14
			2000	1074	148										

				Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
040009	**Teise at Stone Bridge**		C.A: 136.2 km^2	61..95	803		304		1.31	48.3	28/12 1979	0.05	09/11 1990	2.6	0.79	0.19
M.A: EA	Local No: 453230001	Sens.: 22.1	B/full: 50.0m^3s^{-1}													
F.A.R: RPGE	Level: 25m	UE: <.01	FAI: 0.905													
Comment: Flat V weir (commissioned 09/95) superseded a broad-crested weir (crest width: 5.95m; weir capacity: approx. 3 m^3s^{-1}) in trapezoidal section. Cableway at site - calibration extends throughout the flow range; gauging of 54 m^3s^{-1} after the 10/2000 peak. Significant baseflow but responsive also. Bewl Water Reservoir offtake is c1km u/s. Augmentation (from Bewl Water) very evident during periods of low flow, e.g. in 1989/90. # A rural catchment developed on sand and clay of the Wealden Series.				1996	671	84	235	77	1.01	9.1d	12/02	0.19	30/08	1.3	0.91	0.40
				1997	826	103	257	85	1.11	14.7d	18/12	0.18	08/08	1.5	0.90	0.29
				1998	864	108	369	121	1.59	19.1d	02/01	0.30	06/09	3.2	0.99	0.38
				1999	845	105	325	107	1.41	26.5d	24/12	0.21	05/10	2.2	0.97	0.51
				2000	1285	160	574	189	2.47	104.0	12/10	0.21	17/09	5.1	0.95	0.39
040005	**Beult at Stile Bridge**		C.A: 277.1 km^2	58..95	693		233		2.04	81.0	04/11 1960	>0.00	03/08 1976	5.8	0.48	0.07
M.A: EA	Local No: 453210001	Sens.: 11.4	B/full: 100.0m^3s^{-1}													
F.A.R: EI	Level: 12m	UE: <.01	FAI: 0.994													
Comment: Compound structure - central flume separated, by short divide piers, from broad-crested flanking sections with cableway for high flows. Calibration based upon model tests and gaugings; 78 m^3s^{-1} gauged during 10/2000 flood. Flood banking confines flows. Small overall impact of artificial influences - abstraction is agricultural (and, therefore, very variable). # Geology: principally Weald Clay (but includes some pervious s'sts) - baseflow is very low for a Kent catchment. Predominately rural with scattered settlements.				1996	536	77	91	39	0.80	23.2	12/02	0.02	23/07	1.6	0.27	0.06
				1997	723	104	183	79	1.61	48.0	19/12	0.03	11/07	4.6	0.25	0.06
				1998	750	108	251	108	2.20	38.2	02/01	0.03	18/08	6.7	0.50	0.05
				1999	760	110	206	88	1.81	55.0	25/12	0.03	21/07	4.9	0.39	0.08
				2000	1059	153	512	220	4.49	84.6d	12/10	0.07	14/09	11.6	0.75	0.09
040003	**Medway at Teston**		C.A: 1256.1 km^2	56..95	757		276		11.00	294.5	04/11 1960	0.38	22/08 1976	24.6	4.79	1.47
M.A: EA	Local No: 453202001	Sens.: 11.8	S/full: 14.0m^3s^{-1}													
F.A.R: SRPG	Level: 7m	UE: .02	FAI: 0.949													
Comment: Crump weir plus sharp-crested weir (on flood gate); insensitive, but less so than previous broad-crested weir. Flows > c25 m^3s^{-1} measured 2km d/s at East Farleigh (well calibrated; 226 m^3s^{-1} gauged in 10/2000)- but some hysteresis problems. Combination of flows with Teston may not be complete. Responsive regime. Bypassed by navigation lock. Complex water utilisation; low flow augmentation from Bewl Water (via R. Teise); >20 yrs of naturalised flows available. # Mixed geology; impervious formations constitute up to 50% of the catchment. Diverse land use with significant areas of woodland and orchard.				1996	608	80	151	55	5.98	96.3	12/02	1.37	20/07	10.9	3.39	1.79
				1997	767	101	187	68	7.46	116.4	18/12	1.64	14/09	19.0	3.50	1.77
				1998	790	104	327	118	13.04	145.2	02/01	1.69	28/07	34.3	5.29	2.34
				1999	767	101	249	90	9.91	167.0	25/12	1.74	09/09	23.5	4.09	1.92
				2000	1148	152	564	204	22.38	274.8	13/10	1.90	26/08	62.2	7.30	2.17
040029	**Len at Lenside**		C.A: 69.7 km^2	84..95	701		322		0.71	3.9	30/01 1988	0.18	28/12 1989	1.2	0.58	0.35
M.A: EA	Local No: 453120001	Sens.: 15.6														
F.A.R: E	Level: 9m	UE:	FAI:													
Comment: Flat V weir, theoretically rated. Most flows contained but peaks truncated at approx. 3.8 m^3s^{-1}. Chart recorder only. Reliable springs sustain flows through summer months. Effluent returns from Leeds STW have substantial impact on flow pattern. # Geology: Lower Greensand, Folkestone and Hythe Beds. Predominantly rural land use, although urbanised in lower catchment near confluence with the Medway.				1996	543	77	198	61	0.44	2.2	*13/02*	0.11	26/11	0.7	0.39	0.21
				1997	686	98	227	70	0.50	2.6d	03/12	0.18	18/08	0.8	0.43	0.26
				1998	742	106	321	100	0.71	2.9	*05/01*	0.22	20/11	1.1	0.61	0.33
				1999	669	95	301	93	0.67	3.9	26/12	0.37	22/07	1.0	0.57	0.38
				2000	992	142										
040015	**White Drain at Fairbrook Farm**		C.A: 31.8 km^2	69..95	684		46		0.05	2.9	31/08 1994	>0.00	26/08 1976	0.1	0.03	0.01
M.A: EA	Local No: 652421001	Sens.: 16.4														
F.A.R: E	Level: 8m	UE:	FAI:													
Comment: Trapezoidal critical depth flume designed for modular operation. Principally a low flow station. Occasional overtopping onto wide alluvial floodplain. Flume tends to silt up, also blocking of stilling intake (e.g. in autumn 2000) - impacting on computed flows. Calibration limit c2.7 m^3s^{-1}. Runoff diminished due to gw abstraction from the Chalk. Sewage effluent - discharging 1km u/s - formed a major component of low flows until 1991 (treatment now undertaken outside catchment). # Mixed geology: Chalk and Lower London Tertiaries provide baseflow, surface runoff from the London Clay.				1996	521	76	20	43	0.02	1.8	19/11	0.01	28/06	0.0	0.01	0.01
				1997	698	102	33	72	0.03	2.7	27/06	0.00	11/08	0.1	>0.00	>0.00
				1998	775	113	45	98	0.04	1.5	14/11	>0.00	27/08	0.1	0.03	0.01
				1999	766	112						0.01	02/08			
				2000	1072	157						0.01	27/08			
040023	**East Stour at South Willesborough**		C.A: 58.8 km^2	76..95	754		391		0.73	11.5	30/12 1993	0.00	01/07 1976	1.8	0.35	0.06
M.A: EA	Local No: 654210001	Sens.: 25.0														
F.A.R: E	Level: 35m	UE:	FAI:													
Comment: Flat V weir, 1:10 cross-slope, superseded a VA station (affected by weedgrowth) in 1976. Theoretical rating - to 5.3 m^3s^{-1} (under review). Improved d/s conditions have increased modular range. Almost all flows contained but flood alleviation scheme truncates peaks. Mill sluice operation and, from 1990, flood retention reservoirs provide a degree of regulation. Runoff increased by sewage effluent. # A rural catchment, developed mostly on clay. Significant land use change from the late 1980s (industrial/commercial development, By-pass etc) above Ashford.				1996	652	86											
				1997	761	101	299	76	0.56	5.3	20/12	0.03	22/08	1.4	0.25	0.06
				1998	842	112	420	107	0.78	5.3	08/01	0.05	21/08	2.1	0.46	0.09
				1999	838	111	347	89	0.65	5.3	24/10	0.03	30/07	1.8	0.37	0.05
				2000	1130	150	655	168	1.22	5.3	01/11	0.05	26/08	3.6	0.60	0.12
040008	**Great Stour at Wye**		C.A: 230.0 km^2	62..95	739		304		2.22	35.0	20/09 1973	0.22	25/08 1976	4.7	1.37	0.53
M.A: EA	Local No: 654306001	Sens.: 15.1	S/full: 2.8m^3s^{-1}													
F.A.R: GE	Level: 29m	UE: .03	FAI: 0.984													
Comment: Crump weir (width 7.61m) - drowns at <3 m^3s^{-1} (no flow adjustment) - VA station (just d/s) for high flows. Weedgrowth can cause overestimation of flows. Ashford effluent is a sig. component of low flows; small net import of water. Flood retention reservoirs above Ashford (constructed 1990-2). Hydrographs show evidence of u/s mill sluice operation (declining). # The E & W branches of the Stour flow over impermeable (mainly) Weald Clay; below Ashford (the only major settlement) Chalk predominates. A rural catchment with mixed land use.				1996	600	81	178	59	1.30	16.4	12/08	0.35	08/08	2.6	0.97	0.44
				1997	766	104	268	88	1.95	23.1	19/12	0.30	25/09	4.1	1.06	0.48
				1998	820	111										
				1999	813	110	307	101	2.24	20.1	24/12	0.35	08/09	4.9	1.52	0.62
				2000	1114	151										
040011	**Great Stour at Horton**		C.A: 345.0 km^2	64..95	750		291		3.18	31.1	29/01 1988	0.66	19/09 1990	6.0	2.30	1.09
M.A: EA	Local No: 654400001	Sens.: 9.5	S/full: 46.0m^3s^{-1}													
F.A.R: GE	Level: 13m	UE: .02	FAI: 0.982													
Comment: Broad-crested weir (width: 10.7m, insensitive) in trapezoidal section plus a VA section for flows >20 m^3s^{-1}. (EM installed 1992 - some technical difficulties). All flows contained. Minor impact of artificial influences on runoff (import of 0.03 m^3s^{-1} in 1988), modest PWS and irrigation abstractions in lower valley. Flood storage reservoirs above Ashford (constructed 1990-2). U/s mill regulation evident on the hydrographs. # The east and west branches of the Stour flow over Weald Clay; below the confluence (at Ashford) Chalk dominates. A rural catchment with mixed land use.				1996	602	80	152	52	1.66	10.4	20/11	0.56	08/08	3.0	1.34	0.75
				1997	767	102	203	70	2.22	23.9	19/12	0.50	01/10	4.6	1.34	0.68
				1998	821	109	285	98	3.11	16.7	02/01	0.88	30/08	6.2	2.44	0.96
				1999	812	108	269	92	2.94	20.8	25/12	0.87	09/09	5.9	2.14	1.10
				2000	1131	151	484	166	5.28	32.4	07/11	1.48	25/09	13.0	2.98	1.66
040033	**Dour at Crabble Mill**		C.A: 49.5 km^2	76..95	862		282		0.44	1.6	09/02 1995	0.01	20/11 1990	0.9	0.26	0.06
M.A: EA	Local No: 654019001	Sens.: 42.3														
F.A.R: G	Level: 16m	UE:	FAI:													
Comment: Flat V weir (1:20 cross-slope, capacity: 1 m^3s^{-1}) within concrete berms in brick-lined section, all flows contained. Modular. Theoretical rating - extends to 1.59 m^3s^{-1} (exceeded in Feb/ Mar 1995 and in early 2001 - 1.73 m^3s^{-1} gauged d/s on 3/2/01). Initially chart recorder only (now telemetry also). VA station prior to 1984. Ornamental lakes u/s. Runoff reduced by substantial gw abstraction. # The Dour is a spring-fed Chalk stream (two main branches) draining to Dover. Rural headwaters but significant development in the lower valley above Crabble Mill.				1996	768	89	66	23	0.10	0.6	11/08	0.03	08/11	0.2	0.09	0.03
				1997	830	96	140	50	0.22	0.9	26/12	0.03	31/10	0.4	0.21	0.05
				1998	945	110	356	126	0.56	1.5	10/06	0.19	22/10	0.9	0.52	0.21
				1999	1012	117	304	108	0.48	1.3	18/07	0.20	11/11	0.8	0.43	0.21
				2000	1267	147	395	140	0.62	1.3	12/10	0.30	06/10	0.9	0.62	0.33
040017	**Dudwell at Burwash**		C.A: 27.5 km^2	71..95	898		345		0.30	44.5	27/12 1979	0.02	29/08 1989	0.6	0.12	0.04
M.A: EA	Local No: 556521001	Sens.: 54.0	S/full: 29.0m^3s^{-1}													
F.A.R: N	Level: 28m	UE: <.01	FAI: 0.994													
Comment: Crump profile weir (crest: 4.88m) in straight reach, high flow rating based on gaugings. Steep banks contain all but exceptional flows. Peak flows truncated at c11 m^3s^{-1} (repeated occurrences in 2000). Flow regime is essentially natural. # Geology: Ashdown Sands (about 80% - variable permeability) and Purbeck Beds (about 20%). A relatively steep, rural catchment draining from the High Weald.				1996	696	78	175	51	0.15	6.5	08/01	0.01	02/11	0.3	0.09	0.03
				1997	937	104	318	92	0.28	11.4	18/12	0.03	21/09	0.7	0.09	0.03
				1998	1010	112	431	125	0.38	11.7	02/01	0.04	23/09	0.7	0.18	0.05
				1999	918	102	340	99	0.30	11.7	19/01	0.04	02/08	0.6	0.13	0.05
				2000	1385	154	714	207	0.62	6.7d	29/10	0.04	23/08	1.6	0.24	0.05

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
040004	**Rother at Udiam** C.A: 206.0 km^2	**62..95**	**864**		**339**		**2.21**	**56.4d**	**23/11 1984**	**0.06**	**13/10 1990**	**5.6**	**0.80**	**0.17**
M.A: EA	Local No: 556505001 Sens.: 23.8 S/full: 2.5m^3s^{-1}													
F.A.R: SGE	Level: 2m UE: <.01 FAI: 0.975													
Comment: Flat V weir with - since 12/2000 - multi-path ultrasonic to extend the range. Before upgrade flows truncated at approx. 5.9 m^3s^{-1} (d/s tidal sluice limits modularity). Cableway at site (65 m^3s^{-1} gauged in 11/2000). Sig. underestimation of runoff; 1992-2000 flows under review. Prior to 1992, b-c weir (crest deformation suspected, low flows overestimated); current meter calibration used. Flow confined (at Udiam) except in extreme floods. Offtake for Darwell Res. u/s (on Dudwell). Small net export of water. # Responsive catchment; mainly on clays of Wadhurst series, substantial tracts of Ashdown Sands also. Rural with sig. woodland.	1996	685	79	109	32	0.71	5.9	*30/11*	0.12	16/11	2.0	0.30	0.16
	1997	907	105	195	58	1.27	5.9	12/12	0.13	22/10	4.6	0.35	0.16
	1998	948	110	277	82	1.81	5.9	29/12	0.23	30/08	5.4	0.93	0.26
	1999	894	103	212	63	1.39	5.9	14/12	0.15	19/10	4.8	0.54	0.21
	2000	1360	157	774	228	5.04	**83.0d**	**12/10**	0.24	25/08	13.1	1.37	0.29
040021	**Hexden Channel at Hopemill Br Sandhurst** C.A: 32.4 km^2	**75..95**	**778**		**296**		**0.30**	**7.3**	**23/01 1984**	**>0.00**	**12/08 1995**	**0.7**	**0.15**	**0.03**
M.A: EA	Local No: 556710001 Sens.: 23.3 S/full: 7.3m^3s^{-1}													
F.A.R:	Level: 5m UE: FAI:													
Comment: Trapezoidal critical depth flume. Structure capacity 2.25 m^3s^{-1}, channel capacity is considerably greater but bypassing on lb. Some truncation of peaks at around 5-7 m^3s^{-1}. # A relatively narrow catchment trending SE from headwaters in the High Weald (source is in Bedgebury Forest). Rural land use - about 20% woodland - developed on Wadhurst Clay (about 50%) and the overlying Tunbridge Wells Sands.	1996	627	81	155	52	0.16	6.4	12/02	0.01	01/08	0.3	0.09	0.02
	1997	828	106											
	1998	855	110	382	129	0.39	5.4	07/01	0.03	13/08	0.9	0.19	0.05
	1999	844	108	297	100	0.31	5.4	24/04	0.03	09/09	0.7	0.14	0.04
	2000	1254	161	614	207	0.63	5.4	12/11	0.04	17/09	1.8	0.27	0.06
041017	**Combe Haven at Crowhurst** C.A: 30.7 km^2	**69..95**	**787**		**326**		**0.32**	**9.1**	**26/01 1995**	**>0.00**	**18/10 1989**	**0.7**	**0.13**	**0.02**
M.A: EA	Local No: 351110006 Sens.: 59.1 S/full: 21.8m^3s^{-1}													
F.A.R: G	Level: 2m UE: FAI:													
Comment: Compound Crump profile weir (crests: 2.44m and 2 x 2.13m broad) subject to frequent drowning. Full range station. Poor differentiation between low flows over lengthy periods (repeated sequences of 0.02 m^3s^{-1} being common). Earliest data less reliable due to subsidence of the weir. # Mixed geology - mainly impervious (Wadhurst Clay) but with significant areas of Tunbridge Wells and Ashdown Sands. A predominantly rural catchment with some urban centres.	1996	585	74	106	33	0.10	2.4	06/01	0.01	13/09	0.2	0.06	0.01
	1997	889	113	318	98	0.31	7.1	18/12	0.02	21/09	0.7	0.08	0.02
	1998	867	110	420	129	0.41	7.8	07/01	0.02	26/08	0.7	0.19	0.02
	1999	840	107	332	102	0.32	**9.4**	**26/12**	0.02	07/09	0.6	0.11	0.02
	2000	1202	153				**10.7**	**31/10**						
041001	**Nunningham Stream at Tilley Bridge** C.A: 16.9 km^2	**50..95**	*838*		**336**		**0.18**	**11.9**	**17/11 1963**	**0.01**	**12/09 1990**	**0.4**	**0.06**	**0.01**
M.A: EA	Local No: 351221005 Sens.: 60.0 S/full: 8.8m^3s^{-1}													
F.A.R: R	Level: 4m UE: FAI:													
Comment: Compound thin-plate weir with compound critical depth flume. Plate weir (insensitive) used in summer to overcome drowning of flume and increase depth for 'wet fencing' u/s. Need to check data from plate weir changeover days. Early flow records unreliable. Frequency of drowning reduced following d/s channel improvements - under non-modular conditions flows estimated using 41002. Essentially natural regime, although STW upstream. Gw augmentation during droughts (e.g. 1989/90). # Varied topography developed on Hastings Beds - some permeable strata (Ashdown Sands). Mainly arable with considerable woodland.	1996	611	73	124	37	0.07	*4.3*	*09/01*	**0.01**	**17/09**	0.1	0.03	0.01
	1997	858	102	307	91	0.16	4.1	10/12	0.01	03/06	0.4	0.04	0.01
	1998	914	109	488	145	0.26	5.9	10/04	0.01	12/08	0.8	0.10	0.02
	1999	822	98	307	91	0.16	8.8	24/12	0.01	02/08	0.3	0.05	0.01
	2000	1269	151	891	265	0.48	6.8d	02/11	0.01	25/08	1.1	0.12	0.02
041002	**Ash Bourne at Hammer Wood Bridge** C.A: 18.4 km^2	**51..95**	**865**		**408**		**0.24**	**13.1**	**17/11 1963**	**0.02**	**13/09 1995**	**0.6**	**0.11**	**0.04**
M.A: EA	Local No: 351223005 Sens.: 22.5 S/full: 8.8m^3s^{-1}													
F.A.R: RG	Level: 7m UE: FAI:													
Comment: Compound thin-plate weir with compound critical depth flume (with minor tilting). Plate weir used in summer (maintains depth for wet fencing u/s); insensitive and flow pattern can be erratic due to raising/lowering of plate. Frequency of drowning reduced following d/s channel improvements in 1953. Highest flows exceed the structure calibration. Limited storage in Ashburnham Lake. Minor net effect of abstractions and discharges but significant gw augmentation (from Ashdown Sands) in most summers. # A mainly impervious catchment (Wadhurst Clay) of rural character, with considerable woodland.	1996	596	69	168	41	0.10	2.8	12/02	0.03	25/08	0.2	0.07	0.04
	1997	913	106	377	92	0.22	8.5	18/12	**0.01**	**13/05**	0.6	0.07	0.02
	1998	920	106	402	99	0.23	5.9	07/01	0.02	01/09	0.5	0.12	0.03
	1999	850	98	318	78	0.19	8.8	24/12	0.02	25/07	0.4	0.08	0.03
	2000	1246	144	675	165	0.39	8.9	05/11	0.01	26/07	0.9	0.15	0.02
041016	**Cuckmere at Cowbeech** C.A: 18.7 km^2	**39..95**	**870**		**341**		**0.20**	**18.8**	**07/10 1987**	**>0.00**	**21/06 1976**	**0.5**	**0.08**	**0.01**
M.A: EA	Local No: 351550005 Sens.: 100.0 S/full: 10.0m^3s^{-1}													
F.A.R: PG	Level: 30m UE: .01 FAI: 0.966													
Comment: Asymmetrical compound Crump profile weir (crests: 2.13m and 2.97m broad) with crest tapping - not currently used. Very limited head during droughts. Structure capacity exceeded in large floods. Early data (1939-67) is of poorer quality and relates to low flows only. Responsive to rainfall on impervious fraction of catchment. STW discharges u/s, but earlier surface and gw abstractions have ceased. # A rural catchment developed on mixed geology (Hastings Beds predominate).	1996	673	77	180	53	0.11	6.3	08/01	0.01	05/08	0.2	0.05	0.01
	1997	912	105	370	109	0.22	15.0	18/12	0.01	03/06	0.6	0.06	0.02
	1998	962	111	465	136	0.28	16.4	31/10	0.02	27/08	0.5	0.14	0.03
	1999	884	102											
	2000	1354	156	874	256	0.52	18.7	11/10	0.03	24/08	1.2	0.20	0.04
041029	**Bull at Lealands** C.A: 40.8 km^2	**78..95**	**834**		**358**		**0.46**	**30.0**	**30/12 1993**	**0.01**	**22/08 1995**	**1.1**	**0.20**	**0.03**
M.A: EA	Local No: 351540001 Sens.: 35.0 S/full: 58.9m^3s^{-1}													
F.A.R: N	Level: 18m UE: FAI:													
Comment: Flat V weir (crest width: 5m, cross-slope 1:10) constructed in 1978. Theoretically rated, most flows contained. Essentially natural flow regime with minimal abstraction. # Rural catchment draining the High Weald. Mixed geology.	1996	651	78	154	43	0.20	9.8	09/01	0.01	26/07	0.4	0.09	0.01
	1997	888	106	285	80	0.37	13.7	18/12	0.02	30/07	1.1	0.10	0.02
	1998	940	113	378	106	0.49	12.9	31/10	0.03	12/08	1.1	0.21	0.03
	1999	856	103	287	80	0.37	23.9	24/12	0.03	01/08	0.8	0.13	0.03
	2000	1340	161	730	204	0.94	**40.2**	**12/10**	0.04	25/08	2.2	0.28	0.05
041003	**Cuckmere at Sherman Bridge** C.A: 134.7 km^2	**59..95**	**829**		**313**		**1.34**	**83.6**	**30/01 1961**	**0.01**	**24/08 1976**	**3.1**	**0.41**	**0.07**
M.A: EA	Local No: 351520004 Sens.: 16.3 S/full: 50.6m^3s^{-1}													
F.A.R: SP	Level: 4m UE: .02 FAI: 0.989													
Comment: Flat V weir (width 10m, cross-slope 1:10), high flows from VA station u/s at Arlington, but truncated at c27 m^3s^{-1} - common in 2000. Replaced, in 1994, Compound b-c weir (no flows 29/9/92 - 3/3/94) - drowned regularly (tidal influence); flows then assessed using fall-discharge method (adjustment discon. 1981 - peaks truncated at around 5 m^3s^{-1} until c1990, and 27.2 thereafter). All flows contained. Responsive flow pattern. Limited net impact of variations but Arlington pumped storage res. u/s. # Geology mixed (mainly Hastings Beds and Gault Clay). Narrow, mainly rural catchment with significant areas of woodland.	1996	653	79	128	41	0.54	21.9	09/01	0.04	23/07	1.1	0.14	0.05
	1997	906	109	293	94	1.25	27.2	10/11	0.05	03/06	3.4	0.17	0.07
	1998	942	114	379	121	1.62	27.2	27/12	0.05	18/09	4.0	0.41	0.09
	1999	863	104	288	92	1.23	27.2	27/12	0.04	20/08	2.9	0.25	0.07
	2000	1304	157	679	217	2.89	27.2	03/11	0.09	22/06	8.1	0.78	0.12
041024	**Shell Brook at Shell Brook** C.A: 22.6 km^2	**71..95**	**866**		**340**		**0.24**	**11.3**	**21/11 1974**	**0.00**	**03/01 1990**	**0.5**	**0.15**	**0.01**
M.A: EA	Local No: 352835017 Sens.: 90.0 S/full: 23.3m^3s^{-1}													
F.A.R: SRP	Level: 38m UE: FAI:													
Comment: Flat V weir, 1:10 cross slope, from summer 1995, modified from the existing Crump profile weir (crest: 4.0m broad), station level remains unchanged. Runoff pattern changed fundamentally following the construction of Ardingly Res. (1978) immediately u/s. # Catchment is mainly permeable Hastings Beds with Wadhurst Clay in the valley. A rural, heavily wooded basin.	1996	723	83	251	74	0.18	0.9	25/02	>0.00	14/01	0.5	0.12	0.01
	1997	902	104	266	78	0.19	1.6	24/12	>0.00	15/10	0.4	0.11	0.01
	1998	957	111	409	120	0.29	3.3	02/01	0.01	16/07	0.6	0.20	0.03
	1999	880	102											
	2000	1275	147	640	188	0.46	7.0	30/10	>0.00	03/10	1.0	0.27	0.03
041005	**Ouse at Gold Bridge** C.A: 180.9 km^2	**60..95**	*865*		**388**		**2.23**	**86.9**	**22/11 1974**	**0.12**	**21/08 1976**	**4.9**	**1.24**	**0.31**
M.A: EA	Local No: 352810006 Sens.: 12.8 S/full: 12.2m^3s^{-1}													
F.A.R: SRPGE	Level: 11m UE: .02 FAI: 0.924													
Comment: Flat V weir (crest: 10m wide, cross slope 1:10) commissioned 7/92, superseding compound short-crested weir (width 10.7m). Cableway for higher flows. All but exceptional floods contained (two subsidiary culverts used to accomodated overflow). 85 m^3s^{-1} gauged following 2000 peak. Releases from Ardingly res. (from 1978) augment flows in most summers. STW and flood retention structures u/s, but otherwise artificial influences have a limited net impact. # Mixed geology with substantial permeable outcrops - particularly Tunbridge Wells Sands. Diverse land use - chiefly rural with significant woodland but some urban centres.	1996	670	77	*194*	50	1.11					2.0	0.74	0.35
	1997	897	104	296	76	1.70	19.3	23/11	0.41	01/06	3.9	0.69	0.45
	1998	928	107	399	103	2.29	25.6	02/01	0.42	14/09	5.1	1.33	0.53
	1999	826	95	298	77	1.71	56.1	24/12	0.39	16/09	3.6	0.83	0.48
	2000	1283	148	723	186	4.13	*100.0*	*12/10*	0.51	19/07	8.8	1.74	0.61

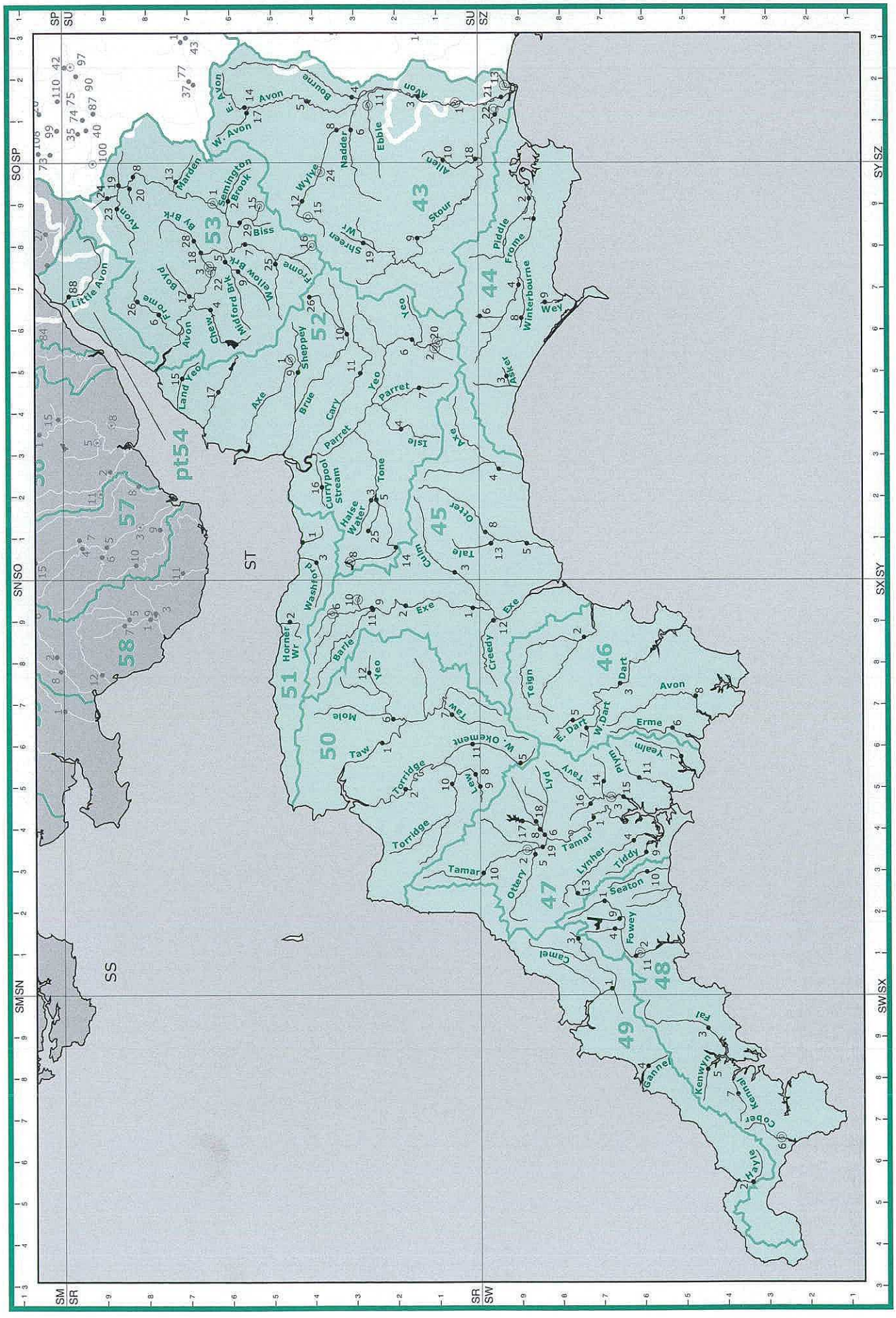
		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
041006	**Uck at Isfield** C.A: 87.8 km^2	**64..95**	**832**		**412**		**1.15**	**75.6**	**13/02 1974**	**0.06**	**27/06 1992**	**2.3**	**0.52**	**0.17**
M.A: EA	Local No: 352910003 Sens.: 31.1 S/full: 76.0m^3s^{-1}													
F.A.R: E	Level: 11m UE: .02 FAI: 0.983													
Comment: Flat V (1:10 cross-slope) superseded, in 1999, a Crump profile weir (7.62m wide) with crest tapping. Modular capacity of the earlier Crump was 51 m^3s^{-1} but structure subject to drowning in the medium flow range (c10-30 m^3s^{-1}). Cableway also installed in 1999. No substantial abstractions but discharge from STW (and operation of Uckfield Mill flood gates) can produce abrupt flow changes. # Catchment geology is very mixed; Hastings Beds predominate. Above Isfield the catchment is rural with significant areas of woodland, but the Uckfield urban area is expanding.	1996	666	80	232	56	0.64	51.0	09/01	0.11	19/08	1.1	0.35	0.12
	1997	890	107	356	86	0.99	47.4	18/12	0.12	03/10	2.3	0.33	0.14
	1998	896	108	503	122	1.40	52.2	24/10	0.19	28/08	2.4	0.61	0.21
	1999	841	101										
	2000	1337	161	893	217	2.48	57.4d	13/10	0.16	31/08	5.2	0.77	0.20
041021	**Clayhill Stream at Old Ship** C.A: 7.1 km^2	**69..95**	**794**		**369**		**0.08**	**7.4**	**30/12 1993**	**0.00**	**11/12 1995**	**0.2**	**0.02**	
M.A: EA	Local No: 352712005 Sens.: S/full: 13.9m^3s^{-1}													
F.A.R: N	Level: 6m UE: <.01 FAI: 1.000													
Comment: Crump profile weir (crest: 3.0m broad) with crest tapping - structure has proved to be modular throughout the flow range. Some (sporadic) early flow data available (at Southern Water) from 1955. Extended periods with zero flow. # The Clayhill stream is ephemeral and drains an impervious (Weald Clay) catchment. Land use: almost exclusively rural with considerable woodland.	1996	660	83	173	47	0.04	3.0	*08/01*	0.00	30/04	0.1	0.00	
	1997	871	110										
	1998	920	116	426	115	0.10	4.0	02/01	0.00	18/05	0.2	0.01	
	1999	881	111	324	88	0.07	5.4	24/12	0.00	20/05	0.2	0.01	
	2000	1373	173										
041020	**Bevern Stream at Clappers Bridge** C.A: 34.6 km^2	**69..95**	**874**		**420**		**0.45**	**20.7**	**22/11 1974**	**0.01**	**27/09 1990**	**1.2**	**0.13**	**0.03**
M.A: EA	Local No: 352711019 Sens.: 87.1 S/full: 25.0m^3s^{-1}													
F.A.R: E	Level: 10m UE: .01 FAI: 0.987													
Comment: Crump profile weir (crest: 6.0m broad) with crest tapping - not currently used. Modular limit is about 8 m^3s^{-1}. All flows contained, although stream channel narrows d/s of structure. Negligible impact of artificial influences on river flow. # Primarily an impervious (Weald Clay) catchment but N flowing tributaries from South Downs provide a significant baseflow. A rural catchment with considerable woodland.	1996	740	85	263	63	0.29	15.0	09/01	0.01	06/08	0.6	0.07	0.01
	1997	980	112										
	1998	1037	119	523	125	0.57	17.4	24/10	0.02	20/08	1.5	0.17	0.03
	1999	911	104	382	91	0.42	18.1	24/12	0.02	10/09	1.0	0.12	0.02
	2000	1504	172	915	218	1.00	23.8	11/10	0.02	25/08	2.7	0.26	0.03
041037	**Winterbourne Stream at Lewes** C.A: 17.3 km^2	**66..95**	**916**		**177**		**0.10**	**3.4**	**04/02 1988**	**0.00**	**01/12 1995**	**0.3**		
M.A: EA	Local No: Sens.:													
F.A.R: G	Level: m UE: FAI:													
Comment: Flat V replaced (in 1997) twin-crested (both 1.22m) Crump weir of steel construction (originally intended as temporary structure). Chart recorder only. Modular except for very high flows - when drowning can result from backing-up due to d/s culvert. Baseflow dominated regime. Runoff reduced by gw abstraction. Extended periods with zero flow. # The Winterbourne drains the Chalk of the South Downs. Some urbanisation near the catchment outfall. Significant arable farming in the valley.	1996	732	80	0	0	0.00	0.0d	01/01	0.00	01/01			
	1997	992	108	63	36	0.03	0.6d	31/12	0.00	01/01			
	1998	1023	112	279	158	0.15	*2.2*	*07/01*	0.00	27/06	0.4	0.03	
	1999	946	103	177	100	0.10	1.1d	23/01	0.00	02/05	0.5		
	2000	1468	160	837	473	0.46	**3.6d**	**08/11**	0.00	01/01	1.9		
041012	**Adur E Branch at Sakeham** C.A: 93.3 km^2	**67..95**	**835**		**402**		**1.19**	**44.3**	**27/12 1979**	**0.02**	**28/09 1987**	**2.7**	**0.45**	**0.15**
M.A: EA	Local No: 253220001 Sens.: 5.3 S/full: 30.0m^3s^{-1}													
F.A.R: E	Level: 3m UE: .06 FAI: 0.964													
Comment: Compound Crump profile weir (crests: 1.219m and 2 x 2.438m, rh crest is 0.01m higher than lh) with crest tapping. Weir reconstructed between 11/93 and 4/94. Flows rarely corrected for frequent drowning, high submergence ratios. No substantial abstractions, small net import of water; Burgess Hill sewage effluent has substantial impact on low flows. # Mixed geology - permeable headwaters but predominantly Weald Clay in lower reaches. A largely rural catchment; significant urban growth along the eastern catchment boundary.	1996	659	79	276	69	0.81	33.5	09/01	0.14	23/07	1.5	0.39	0.15
	1997	867	104	400	100	1.18	20.9	09/11	0.14	21/08	2.9	0.35	0.16
	1998	935	112	507	126	1.50	27.8	31/10	0.15	19/08	3.5	0.61	0.17
	1999	827	99	414	103	1.23	**48.3**	**24/12**	0.14	02/08	2.5	0.48	0.17
	2000	1309	157										
041028	**Chess Stream at Chess Bridge** C.A: 24.0 km^2	**64..95**	**853**		**367**		**0.28**	**13.2**	**21/11 1974**	**>0.00**	**02/09 1989**	**0.6**	**0.11**	**0.02**
M.A: EA	Local No: 253211017 Sens.: 11.8 S/full: 13.0m^3s^{-1}													
F.A.R: N	Level: 5m UE: .01 FAI: 0.984													
Comment: Rectangular flume (3.35m width) with a compound thin-plate weir (which is lowered onto the flume) for low flows - normally in place May to Nov; can result in modest discontinuities in processed flows. Flows remain modular. No significant abstractions, very minor effluent contribution to runoff. U/s penstock operation can influence flow pattern. # Very mixed geology; Chalk along southern watershed provides baseflow but catchment largely impervious. Agriculture is predominant land use.	1996	675	79										
	1997	891	104	353	96	0.27	6.1	18/11	0.01	21/08	0.8	0.08	0.02
	1998	957	112	408	111	0.31	6.0	26/12	0.01	09/08	0.7	0.15	0.02
	1999	847	99	280	76	0.21	*6.6*	*24/12*	0.02	11/07	0.5	0.09	0.02
	2000	1359	159	665	181	0.50	*13.5*	*04/11*	0.02	25/08	1.4	0.13	0.03
041010	**Adur W Branch at Hatterell Bridge** C.A: 109.1 km^2	**61..95**	**796**		**294**		**1.02**	**19.8**	**18/03 1971**	**0.00**	**12/09 1983**	**2.9**	**0.29**	**0.03**
M.A: EA	Local No: 253320002 Sens.: 23.3 S/full: 11.3m^3s^{-1}													
F.A.R: N	Level: 4m UE: FAI:													
Comment: Three-bay rectangular critical-depth structure; flanking sections (each 2.16m wide) can be closed to concentrate flow in the central bay (0.864m). Stop-board removal can produce odd flow patterns. Flood flows bypass the structure. Almost all flows truncated at approx. 11 m^3s^{-1} (very common in 2000/01; few high flow gaugings. Sensibly natural - and very responsive - flow regime. # A rural catchment developed principally on impervious formations - Weald Clay dominates.	1996	625	79	140	48	0.48	11.3	12/02	0.01	16/09	1.0	0.11	0.01
	1997	747	94	224	76	0.78	11.4	17/02	0.01	06/10	2.5	0.09	0.02
	1998	865	109	336	114	1.16	11.4	14/01	0.02	21/09	3.5	0.28	0.02
	1999	813	102	241	82	0.83	11.4	26/12	0.01	23/07	2.3	0.19	0.01
	2000	1231	155	1122	382	3.87	11.4	14/12	0.13	25/08	11.0	1.54	0.21
041035	**North at Brookhurst** C.A: 53.9 km^2	**83..95**	**788**		**331**		**0.57**	**32.2**	**09/10 1987**	**0.00**	**08/08 1995**	**1.3**	**0.11**	**0.01**
M.A: EA	Local No: Sens.:													
F.A.R: N	Level: 25m UE: FAI:													
Comment: Flat V weir, 1:10 cross-slope, 5m wide. Large modular range. No major abstractions or discharges. Responsive regime. Trace flows recorded in Aug 1995 and Jul 1996. # A mainly impervious catchment developed on Weald Clay (some Horsham Stone) giving very rapid response times. Very minor Greensand baseflow component from upper catchment. Rural with significant woodland and a number of small lakes.	1996	666	85	214	65	0.36	24.2	09/01	0.00	01/07	0.7	0.07	
	1997	725	92	198	60	0.34	12.2	24/02	>0.00	20/08	1.1	0.03	
	1998	924	117	380	115	0.65	21.7	31/10	>0.00	18/08	1.9	0.11	0.01
	1999	856	109	319	96	0.54	*29.0*	*24/12*	0.01	29/07	1.4	0.13	0.01
	2000	1241	157	730	221	1.24	**39.4**	**05/11**	0.01	13/09	3.0	0.29	0.02
041019	**Arun at Alfoldean** C.A: 139.0 km^2	**70..95**	**795**		**399**		**1.76**	**80.5**	**08/12 1994**	**0.05**	**08/08 1983**	**3.9**	**0.58**	**0.15**
M.A: EA	Local No: 254250008 Sens.: 23.6 S/full: 84.5m^3s^{-1}													
F.A.R: E	Level: 21m UE: FAI:													
Comment: Asymmetrical compound Crump profile weir (crests: 4.0m and 6.0m broad). Crest tapping not currently used; over-estimation of high flows (structure drowns frequently); but post-1995 flows truncated at c15 m^3s^{-1}. Stilling well leakage can influence water levels. Limited impact of artificial influences on runoff - small net augmentation due to sewage effluent, which can significantly affect low flow patterns. # Principally an impervious (Weald Clay) catchment - mainly rural but includes Horsham.	1996	650	82	239	60	1.05	14.5	25/11	0.13	04/09	2.3	0.49	0.15
	1997	737	93	273	68	1.20	14.6	08/12	0.14	17/09	3.1	0.40	0.16
	1998	911	115	423	106	1.86	14.6	02/01	0.17	18/08	5.4	0.76	0.20
	1999	831	105	332	83	1.46	14.6	25/12	0.15	25/07	3.7	0.61	0.17
	2000	1221	154	601	151	2.64	14.6	10/10	0.15	25/08	7.6	1.19	0.19
041025	**Loxwood Stream at Drungewick** C.A: 91.6 km^2	**71..95**	**811**		**373**		**1.08**	**56.8**	**27/12 1979**	**0.01**	**25/08 1995**	**2.5**	**0.23**	**0.04**
M.A: EA	Local No: 254240009 Sens.: 35.0 S/full: 56.8m^3s^{-1}													
F.A.R: N	Level: 13m UE: <.01 FAI: 0.982													
Comment: Asymmetrical compound Crump profile weir (crests: 2.0m and 4.0m broad) with crest tapping. Full range - all flows contained - but drowns (may result from construction of an aqueduct d/s, high levels in the Arun can also be a factor). New high flow rating under development. Abstractions and discharges have a negligible impact on overall runoff but occasional anomalous behaviour at low flow. # An impervious (Weald Clay), rural catchment.	1996	670	83	246	66	0.71	38.6	09/01	0.01	10/09	1.4	0.18	0.02
	1997	721	89	231	62	0.67	42.6	04/03	0.02	02/06	1.7	0.09	0.03
	1998	934	115	425	114	1.23	28.6	05/01	0.04	16/08	3.2	0.32	0.05
	1999	902	111										
	2000	1268	156	899	241	2.60	**58.7**	**06/11**	0.05	14/09	7.2	0.82	0.07
041018	**Kird at Tanyards** C.A: 66.8 km^2	**69..95**	**793**		**380**		**0.81**	**31.6**	**02/10 1993**	**0.00**	**01/09 1995**	**1.9**	**0.13**	
M.A: EA	Local No: 254220010 Sens.: S/full: 31.0m^3s^{-1}													
F.A.R: N	Level: 9m UE: <.01 FAI: 0.967													
Comment: Crump profile weir (8.7m broad - fall of 0.012m along crest due to settlement) with crest tapping - not currently used. Structure is insensitive and subject to drowning. Station decommissioned in 2001. Very minor impact of artificial influences on the responsive flow regime. # An impervious (Weald Clay) catchment given over to agriculture; some extensive woodland tracts.	1996	650	82	246	65	0.52	26.3	09/01	0.00	26/06	0.9	0.07	
	1997	733	92	272	72	0.58	16.5	25/02	0.00	28/05	1.3	0.03	
	1998	920	116	487	128	1.03	18.1	24/10	0.00	30/07	2.6	0.13	
	1999	901	114	484	127	1.02	31.4	24/12	>0.00	22/07	2.2	0.17	
	2000	1295	163	1073	282	2.27	31.7	30/10	0.02	20/08	7.9	0.54	0.05

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
041014	**Arun at Pallingham Quay** C.A: 379.0 km^2	**70..95**	**779**		**304**		**3.66**	**93.6**	**12/01 1972**	**0.12**	**13/09 1973**	**8.6**	**1.27**	**0.33**
M.A: EA	Local No: 254210010 Sens.: 26.5													
F.A.R: E	Level: 4m UE: .02 FAI: 0.973													
Comment: Flat V weir (installed in 1994) with (from 2002) US for high flows. Superseded an insensitive broad-crested weir (15m wide), with 0.03m fall along crest due to settlement. Despite cableway installation, velocity-area measurement is restricted by effects of tidal lag at high flows. Tides also cause drowning. All but exceptional floods contained but most post-1979 peak flows truncated at about 55 m^3s^{-1}. Relatively natural catchment. # Predominantly impervious (largely Weald Clay and Lower Greensand) catchment. Land use: mixed - basically rural. Up to 20% woodland. Growing urban fraction especially around Horsham.	1996	650	83	240	79	2.88	57.5	09/01	0.13	06/08	7.3	0.83	0.21
		1997	726	93	278	91	3.34	57.5	25/02	0.23	04/10	11.9	0.64	0.26
		1998	909	117	458	151	5.50	57.5	01/11	0.21	21/08	17.2	1.28	0.24
		1999	861	111	375	123	4.50	57.5	20/01	0.21	29/07	13.7	1.14	0.24
		2000	1244	160	719	237	8.61	57.5	10/12	0.26	13/09	23.3	2.48	0.31
041027	**Rother at Princes Marsh** C.A: 37.2 km^2	**72..95**	**891**		**417**		**0.49**	**27.8**	**12/10 1993**	**0.08**	**29/06 1976**	**0.9**	**0.32**	**0.15**
M.A: EA	Local No: 254360008 Sens.: 23.8 S/full: 43.5 m^3s^{-1}													
F.A.R: GE	Level: 56m UE: .01 FAI: 0.973													
Comment: Crump profile weir (crest: 5.0m broad) with crest tapping - not currently used. Additional flow data available for prototype electromagnetic gauging station (1974-79) immediately d/s. Abstractions and discharges have a minor impact on flows - small net loss. # Mixed geology - 50% permeable; Chalk predominates in the headwaters. A rural catchment with large woodland tracts.	1996	784	88	305	73	0.36	18.8	08/01	0.11	25/07	0.6	0.26	0.12
		1997	798	90	257	62	0.30	5.3	17/02	0.11	21/08	0.6	0.20	0.12
		1998	1054	118	499	120	0.59	20.2	05/01	0.17	11/08	1.0	0.39	0.18
		1999	995	112	486	117	0.57	27.0	24/12	0.14	12/09	1.0	0.33	0.15
		2000	1346	151	839	201	0.99	*27.1*	*12/12*	0.19	24/08	1.8	0.46	0.20
041011	**Rother at Iping Mill** C.A: 154.0 km^2	**66..95**	**928**		**446**		**2.18**	**68.6**	**08/12 1994**	**0.37**	**24/08 1976**	**4.4**	**1.36**	**0.62**
M.A: EA	Local No: 254340011 Sens.: 6.9 S/full: 67.0 m^3s^{-1}													
F.A.R: GE	Level: 27m UE: .01 FAI: 0.974													
Comment: Compound Crump profile weir (crests: 3.05m and 2 x 5.03m broad). Non-modular during high flows (conveyance affected by growth of trees d/s). Bypassing during exceptional floods. Large baseflow component in river flows. Abstractions for spray irrigation and STW discharges affect the flow regime; limited impact overall. The Rother is influent above Iping Mill. # Mixed geology: 60% pervious - large tracts of Lower Greensand. A mainly rural catchment with some urban development.	1996	783	84	328	74	1.60	54.1	09/01	0.48	24/07	2.5	1.14	0.52
		1997	852	92	*302*	68	1.48					3.0	1.01	0.51
		1998	1053	113	519	116	2.54	36.3	05/01	0.58	18/08	5.3	1.68	0.64
		1999	996	107	461	103	2.25	40.7	16/01	0.52	26/07	4.9	1.36	0.58
		2000	1405	151	860	193	4.19	63.2	29/10	0.70	25/08	8.5	2.16	0.76
041022	**Lod at Halfway Bridge** C.A: 52.0 km^2	**70..95**	**866**		**352**		**0.58**	**41.5**	**27/12 1979**	**>0.00**	**01/09 1976**	**1.4**	**0.22**	**0.05**
M.A: EA	Local No: 254323017 Sens.: 68.6 S/full: 41.0 m^3s^{-1}													
F.A.R: N	Level: 14m UE: <.01 FAI: 0.951													
Comment: Crump profile weir (crest: 7.0m broad) with crest tapping (not currently used). All but highest flows modular. Some bypassing in exceptional floods. Minor flow regulation associated with u/s mill. Flows are sensibly natural - small net export of water due to gw abstraction. # Primarily an impervious catchment with Weald Clay more extensive than pervious Lower Greensand. Steep topography in upper catchment. Rural with considerable woodland.	1996	708	82	220	63	0.36	22.4	09/01	0.01	10/09	0.7	0.15	0.02
		1997	776	90	235	67	0.39	8.7	18/02	0.04	01/06	1.0	0.12	0.05
		1998	967	112	423	120	0.70	11.7	24/10	0.05	20/09	1.9	0.26	0.08
		1999	933	108										
		2000	1349	156				41.2	30/10	0.05	03/07			
041023	**Lavant at Graylingwell** C.A: 87.2 km^2	**70..95**	**942**		**101**		**0.28**	**7.1**	**12/01 1994**	**0.00**	**01/12 1995**	**0.9**		
M.A: EA	Local No: 255220018 Sens.:													
F.A.R: G	Level: 21m UE: <.01 FAI: 1.000													
Comment: Flat V weir; crest breadth 5m. Cross-slope 1:10. Extended periods with zero flow. Weir capacity is 6 m^3s^{-1}, bypassing during extreme events (e.g. Jan 1994 flood peak estimated at 8.1 m^3s^{-1} by gauging). Runoff is substantially reduced by gw abstraction. # The Lavant is an ephemeral stream draining the dip-slope of the South Downs (Chalk). A permeable catchment - sparsely populated in the headwaters. Land use: agricultural with significant woodland; some urban development close to Graylingwell.	1996	760	81			0.00	0.0d	01/01	0.00	01/01			
		1997	937	99	1	1	>0.00	0.3d	31/12	0.00	01/01			
		1998	1039	110	124	123	0.34	2.2	18/01	0.00	05/07	1.0	0.27	
		1999	997	106	120	119	0.33	2.5d	26/01	0.00	03/06	1.3		
		2000	1407	149	353	350	0.97	6.9	14/12	0.00	22/08	4.0	0.34	
041015	**Ems at Westbourne** C.A: 58.3 km^2	**67..95**	**920**		**234**		**0.43**	**5.0**	**30/12 1993**	**>0.00?**	**07/01 1970**	**1.2**	**0.19**	**0.01**
M.A: EA	Local No: 255110010 Sens.: 25.0 S/full: 4.5 m^3s^{-1}													
F.A.R: RG	Level: 10m UE: <.01 FAI: 0.981													
Comment: Asymmetrical compound Crump profile weir; crests: 0.61m (showing effects of erosion) and 4.12m broad. Modular throughout flow range. All flows contained. Differential drawdown can affect river level measurement. Significant net export of water from the catchment (gw abstractions) but low flows augmented by compensation water (from borehole). # The Ems - which is ephemeral over much of its length - is a Chalk stream draining the South Downs. Largely rural with significant woodland.	1996	728	79	46	20	0.09	1.1	08/01	0.01	15/08	0.2	0.04	0.01
		1997	907	99	45	19	0.08	0.6	18/12	0.01	22/09	0.2	0.06	0.01
		1998	1004	109	317	135	0.59	2.4	18/01	0.02	07/10	1.5	0.52	0.04
		1999	939	102	297	127	0.55	2.5	19/01	0.01	02/09	1.8	0.14	0.02
		2000	1378	150	633	271	1.17	**5.1**	**11/12**	0.10	13/09	3.5	0.78	0.15
042025	**Lavant Stream at Leigh Park** C.A: 54.5 km^2	**81..95**	**918**		**28**		**0.05**	**5.3**	**10/01 1993**	**0.00**	**11/12 1995**	**0.1**	**0.02**	**>0.00**
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 12m UE: FAI:													
Comment: Velocity-area station in trapezoidal section. Rating poorly defined at low flows; gaugings also awaited to confirm rating for highest flows. Bypassed by flood flows above 3 m^3s^{-1}. Responsive regime; evident urban influence. Topographical catchment exceeds groundwater catchment. # A largely impervious catchment, substantially urbanised below the headwaters.	1996	760	83	11	39	0.02	0.7	12/02	>0.00	07/08	0.0	>0.00	>0.00
		1997	905	99	19	68	0.03	4.9	25/02	>0.00	23/04	0.1	>0.00	>0.00
		1998	1026	112	57	204	0.10	5.3	24/04	>0.00	08/10	0.2	0.03	0.01
		1999	944	103	48	171	0.08	1.9	24/12	0.01	15/07	0.2	0.06	0.03
		2000	1359	148										
042017	**Hermitage at Havant** C.A: 17.0 km^2	**87..95**	**801**		**575**		**0.31**	**8.2**	**03/02 1994**	**0.01**	**23/07 1995**	**0.8**	**0.20**	**0.03**
M.A: EA	Local No: 153601001 Sens.: 50.0 B/full: 22.6 m^3s^{-1}													
F.A.R: N	Level: 3m UE: .16 FAI: 0.992													
Comment: Velocity-area station, trapezoidal section in formalised reach. Well rated by c/m. All but exceptional flows contained. Some truncation of peaks (at c8 m^3s^{-1}). Chart stage record extends back to 1953. # A mainly impervious catchment - principally Reading Beds and London Clay. Intensive suburban development since the early 1960s.	1996	673	84	274	48	0.15	6.5	11/02	0.03	28/09	0.3	0.08	0.03
		1997	806	101	341	59	0.18	7.4	27/08	0.02	14/05	0.4	0.12	0.03
		1998	900	112	474	82	0.26	7.7	31/10	0.04	09/07	0.6	0.13	0.05
		1999	852	106	382	66	0.21	8.0	24/12	0.02	10/06	0.4	0.11	0.04
		2000	1228	153	1024	178	0.55	**8.2**	**06/11**	0.03	06/08	1.4	0.20	0.05
042001	**Wallington at North Fareham** C.A: 111.0 km^2	**51..95**	**841**		**179**		**0.63**	**20.7**	**08/12 1994**	**0.00**	**01/07 1976**	**1.6**	**0.27**	**0.04**
M.A: EA	Local No: 153309001 Sens.: 25.0 B/full: 10.0 m^3s^{-1}													
F.A.R: G	Level: 4m UE: .04 FAI: 0.981													
Comment: Flat V weir (1:10 cross-slope, 6m wide) - peaks truncated at c20 m^3s^{-1} - superseded, in 1991, a compound critical-depth flume (prior to 1993 flows truncated at around 10 m^3s^{-1} due to bypassing, missing data estimated using 42003). Flashy response, zero flow in exceptionally dry summers. Gw abstraction reduces runoff; spray irrigation can significantly reduce summer flows. Gw catchment < topographical catchment. No data 20/7-3/12/91 due to rebuilding. # Permeable headwaters (Chalk) with impervious Eocene clays dominating the valley. A largely rural catchment.	1996	740	88	96	54	0.34	19.4	09/01	0.01	18/09	0.7	0.17	0.02
		1997	835	99	93	52	0.33	7.5	28/11	0.01	16/08	0.9	0.11	0.02
		1998	975	116	162	91	0.57	20.3	31/10	0.02	31/08	1.3	0.29	0.03
		1999	913	109	149	83	0.53	20.5	24/12	0.01	27/07	1.2	0.24	0.03
		2000	1294	154	338	189	1.19	**20.7**	**12/12**	0.02	24/08	3.2	0.42	0.05
042006	**Meon at Mislingford** C.A: 72.6 km^2	**58..95**	**918**		**419**		**0.97**	**5.3d**	**04/12 1960**	**0.05**	**06/08 1976**	**2.0**	**0.71**	**0.19**
M.A: EA	Local No: 152803001 Sens.: 15.0 B/full: 4.1 m^3s^{-1}													
F.A.R: G	Level: 29m UE: <.01 FAI: 0.980													
Comment: Flat V weir (breadth: 6.6m) superseded (in 2000) a critical depth flume (breadth: 3.66m, theoretical rating) u/s of a small five-arch bridge. Some local bypassing during flood flows. Some stage data missing during Dec 2000 flood but c11 m^3s^{-1} gauging completed near peak. Groundwater abstraction has a noticeable impact on the flow regime; small net export of water from the catchment. # Predominantly a permeable catchment (Chalk - but considerable outcrops of the less permeable Lower and Middle Chalk); some superficial cover. Impervious Reading Beds in the south. A rural catchment with some uncultivated downland.	1996	823	90	269	64	0.62	1.7	09/01	0.21	10/10	1.1	0.61	0.23
		1997	856	93	232	55	0.54	1.7	25/02	0.17	03/11	1.1	0.45	0.20
		1998	1052	115	447	107	1.03	3.4	05/01	0.28	21/09	1.9	1.03	0.30
		1999	1007	110	432	103	1.00	*4.2*	*20/01*	0.22	05/09	2.3	0.62	0.25
		2000	1371	149	719	172	1.65	*11.0*	*13/12*	0.39	12/09	3.6	1.38	0.49
042011	**Hamble at Frogmill** C.A: 56.6 km^2	**72..95**	**868**		**234**		**0.42**	**8.9**	**02/03 1981**	**0.02**	**13/09 1989**	**0.8**	**0.28**	**0.10**
M.A: EA	Local No: 152502001 Sens.: 29.2 B/full: 5.5 m^3s^{-1}													
F.A.R: G	Level: 9m UE: .01 FAI: 0.991													
Comment: Crump profile weir (crest: 3m broad). Local bypassing during flood flows; peaks flows truncated at c8 m^3s^{-1}. Flows significantly reduced by gw abstraction. Substantial baseflow but lower catchment is very responsive. # A predominantly permeable (Chalk) catchment - the upper reaches of the Hamble are ephemeral - with some areas of Reading Beds. Land use: mainly rural - some urban development.	1996	752	87	*168*	72	0.30	7.6	08/01	0.09	24/10	0.5	0.22	0.12
		1997	799	92				5.9	27/11	0.09	15/01			
		1998	949	109	248	106	0.44	7.6	05/01	0.14	12/09	0.8	0.34	0.16
		1999	944	109	244	104	0.44	7.9	24/12	0.06	08/09	0.8	0.29	0.11
		2000	1242	143	364	156	0.65	7.9	30/10	0.12	23/09	1.6	0.36	0.17

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
042009	**Candover Stream at Borough Bridge** C.A: 71.2 km^2	**70..95**	**822**		**236**		**0.53**	**1.9**	**13/01 1994**	**0.19**	**21/08 1992**	**0.8**	**0.47**	**0.28**
M.A: EA	Local No: 152203001 Sens.: 13.0 B/full: 4.6m^3s^{-1}													
F.A.R: RG	Level: 54m UE: <.01 FAI: 0.934													
Comment: Crump profile weir (crest: 3m broad). Modular. Monthly gaugings available from 1956. Runoff reduced by surface gw abstractions but augmentation of low flows is important in dry summers - 1976 and 1989. The gw and topographical divides differ considerably. # An unresponsive catchment (Chalk with some patches of superficial deposits). Many perennial springs - often supporting cress beds. Predominantly rural land use with some woodland.		1996	720	88	212	90	0.48	1.0	09/01	0.23	21/09	0.7	0.46	0.26
		1997	696	85	157	67	0.36	0.6	12/03	0.21	03/11	0.5	0.33	0.22
		1998	966	118	208	88	0.47	0.8	23/12	0.26	23/09	0.6	0.50	0.28
		1999	935	114	263	111	0.59	1.4	24/01	0.32	09/09	0.9	0.50	0.34
		2000	1151	140										
042007	**Aire at Drove Lane Airesford** C.A: 57.0 km^2	**70..95**	*872*		**874**		**1.58**	**3.2d**	**07/03 1995**	**0.74**	**26/08 1976**	**2.1**	**1.50**	**1.03**
M.A: EA	Local No: 152202007 Sens.: 3.9													
F.A.R: RG	Level: 57m UE: <.01 FAI: 0.881													
Comment: Crump profile weir (crest: 2.5m), second Crump profile weir (crest: 1.5m) on side channel. No hits prior to 1992. Pre-1969 monthly c/m results available. From 1989, gw augmentation during drought conditions. Gw catchment (about 114 sq.km.) substantially exceeds topographical catchment. # Principally permeable catchment (Upper Chalk overlain in patches by clay-with-flints). Rural character - rolling downland of mixed farming; some woodland. Extensive cress beds.		1996	794	91	783	90	1.41	1.9d	25/02	1.01	26/10	1.7	1.37	1.05
		1997	738	85	714	82	1.29	1.9	01/01	0.91	18/10	1.6	1.30	0.97
		1998	1021	117										
		1999	986	113	1012	116	1.83	3.0	16/01	1.25	12/09	2.5	1.68	1.37
		2000	1253	144										
042008	**Cheriton Stream at Sewards Bridge** C.A: 75.1 km^2	**70..95**	**894**		**264**		**0.63**	**2.5**	**03/03 1995**	**0.15**	**23/08 1976**	**1.0**	**0.55**	**0.27**
M.A: EA	Local No: 152201001 Sens.: 11.6 B/full: 2.8m^3s^{-1}													
F.A.R: N	Level: 56m UE: <.01 FAI: 0.998													
Comment: Crump profile weir (breadth: 3.0m). All flows contained. Ephemeral in upper reaches. Low flows influenced by neighbouring R. Itchen augmentation scheme (from 1989) - slight reduction in discharge. Pre-1970 monthly series of gaugings available from the measuring authority. Contributing area differs considerably from topographical catchment. # A very permeable (Upper Chalk) catchment - isolated patches of clay-with-flints occur on high ground. Rural land use with considerable downland and wooded areas.		1996	819	92	224	85	0.53	1.3	08/01	0.27	17/10	0.8	0.55	0.28
		1997	792	89	180	68	0.43	0.9	19/03	0.24	04/10	0.7	0.40	0.25
		1998	1042	117	264	100	0.63	1.3	09/11	0.32	25/09	0.9	0.69	0.35
		1999	995	111	298	113	0.71	2.1	27/01	0.34	12/09	1.2	0.58	0.37
		2000	1293	145	483	183	1.15	**4.8**	**12/12**	0.39	12/09	2.9	0.85	0.44
042016	**Itchen at Easton** C.A: 236.8 km^2	**75..95**	**858**		**560**		**4.21**	**10.0**	**22/02 1995**	**2.08**	**13/07 1992**	**5.9**	**4.06**	**2.59**
M.A: EA	Local No: 152204002 Sens.: B/full: 10.0m^3s^{-1}													
F.A.R: RPG	Level: 42m UE: FAI:													
Comment: Electromagnetic gauging station with insulated bed. Installed 1983 - calibration confirmed by c/m. Limited stage and velocity range makes for effective operation. Superseded a velocity-area station heavily affected by weed-growth. Largely natural regime but gw augmentation during very low flows. # A predominantly Chalk catchment with patches of superficial deposits. Largely rural with some woodland.		1996	766	89	505	90	3.78	6.6	08/01	2.62	26/07	4.9	3.81	2.70
		1997	734	86										
		1998	988	115	523	93	3.93	6.1	23/12	2.66	22/09	4.8	4.22	2.78
		1999	957	112	626	112	4.70	8.9	26/01	2.91	01/08	6.8	4.19	3.07
		2000	1206	141	765	137	5.73	**12.8**	**09/11**	3.48	12/09	8.5	5.54	3.60
042010	**Itchen at Highbridge+Allbrook** C.A: 360.0 km^2	**58..95**	*653*		**462**		**5.28**	**12.8d**	**23/02 1995**	**2.17**	**24/08 1976**	**7.8**	**4.83**	**2.93**
M.A: EA	Local No: 152208001 Sens.: 4.9													
F.A.R: RPG	Level: 17m UE: .01 FAI: 0.943													
Comment: Crump weir (Highbridge, 7.75m)replaced, in 1971, a VA station with heavy weedgrowth - the latter can drown present weir) + thin-plate weir (Allbrook) in former navigation channel. Rare bypassing (due to wrong sluice settings in early record). Confirmatory gauging supports remarkable Dec. 2000 peak (when moderate bypassing). Nov/Dec 1993 flows estimated (fish pass constructed). Gw augmentation during droughts. Gw catchment > sw catchment. Artificial influences (gw abstractions, cress farms) have minor, but increasing, impact on baseflow dominated regime; small net export of water. # Very permeable catchment (90% Chalk). Land use: mainly arable with scattered settlements.		1996	734	86	417	90	4.75	8.7d	09/01	2.67	17/09	6.7	4.72	2.85
		1997	715	84	345	75	3.94	6.6	18/02	2.54	18/09	5.4	3.99	2.67
		1998	938	110	472	102	5.39	8.6	18/01	3.06	24/09	7.2	5.80	3.33
		1999	920	108	501	108	5.72	11.9	26/01	3.02	01/08	9.0	4.97	3.33
		2000	1155	135	672	145	7.65	**20.5**	**12/12**	3.92	13/09	11.9	7.01	4.26
042018	**Monks Brook at Stoneham Lane** C.A: 43.3 km^2	**87..95**	**800**		**160**		**0.22**	**9.1**	**27/01 1995**	**0.01**	**31/08 1991**	**0.6**	**0.09**	**0.02**
M.A: EA	Local No: 152104001 Sens.: 47.8 B/full: 4.5m^3s^{-1}													
F.A.R: N	Level: 8m UE: FAI:													
Comment: Flat V weir (1:10 cross-slope) with c/m calibration for high flows. High flow gauging at footbridge and ford about 200m u/s; trapeziodal concrete channel between ford and gauging station. 1995/96 excepted, most peak flows truncated (c2.7 m^3s^{-1}). Previously a velocity-area station (with piling stabilised banks). # A mostly low-lying catchment developed on impervious Tertiary formations. Mixed land use: rural headwaters with considerable woodland, substantial urban development near the station (Chandler's Ford/Eastleigh).		1996	676	85	158	99	0.22	7.2	03/11	0.02	18/09	0.5	0.11	0.02
		1997	741	93	128	80	0.18	2.7	22/11	0.02	03/10	0.5	0.07	0.02
		1998	873	109	172	108	0.24	2.8	23/12	0.02	22/08	0.6	0.11	0.02
		1999	871	109	188	118	0.26	2.8	24/12	0.04	04/09	0.6	0.14	0.04
		2000	1143	143	278	174	0.38	2.8	03/12	0.03	24/08	1.0	0.18	0.04
042023	**Itchen at Riverside Park** C.A: 415.0 km^2	**82..95**	**839**		**408**		**5.37**	**25.1**	**18/08 1994**	**1.64**	**17/08 1995**	**9.1**	**5.10**	**2.75**
M.A: EA	Local No: Sens.:													
F.A.R: RPE	Level: 1m UE: FAI:													
Comment: Ultrasonic gauging station (multi-path with reflector). Tidal effects occasionally evident (dependant on d/s sluice operation). Flows artificially influenced by two 45 Ml/d surface water abstractions at Gaters Mill and Otterbourne and a large STW discharge at Eastleigh. Groundwater augmentation (in headwaters) can be important. # Principally a rural, Chalk catchment but with appreciable urban growth near the outfall (where impervious Tertiary formations predominate).		1996	729	87	389	95	5.11	19.4	09/01	2.47	26/07	7.3	4.98	2.93
		1997	724	86	322	79	4.24	11.3	17/02	2.45	18/09	5.7	4.17	2.72
		1998	935	111	454	111	5.98	17.5	05/01	3.11	13/08	8.4	6.06	3.47
		1999	919	110	496	122	6.53	21.1	16/01	2.80	01/08	10.5	5.62	3.59
		2000	1159	138										
042019	**Tanners Brook at Millbrook** C.A: 16.0 km^2	**77..95**	**812**		**325**		**0.17**	**4.8**	**26/05 1993**	**0.00**	**19/09 1991**	**0.3**	**0.15**	**0.03**
M.A: EA	Local No: 151901001 Sens.: 52.0													
F.A.R: N	Level: 4m UE: FAI:													
Comment: Velocity-area station in a trapezoidal concrete section. Initially a level only station but stage-discharge relation now established for all but the highest flows. Pre- (and some post-) 1992 peaks truncated (c1.0 m^3s^{-1}). Responsive regime. # A largely urban (Southampton) catchment developed on impervious Tertiary formations.		1996	693	85	303	93	0.15	1.0	03/11	0.07	27/12	0.2	0.13	0.09
		1997	750	92										
		1998	894	110	347	107	0.18	2.9	06/04	0.00	17/08	0.4	0.13	
		1999	891	110	441	136	0.22	**5.0**	**24/12**	0.02	27/06	0.4	0.15	0.06
		2000	1173	144										
042024	**Test at Chilbolton (Total)** C.A: 453.0 km^2	**89..95**	**813**		**381**		**5.48**	**13.7d**	**02/03 1995**	**2.58**	**07/09 1989**	**9.9**	**4.51**	**2.95**
M.A: EA	Local No: Sens.:													
F.A.R: N	Level: 39m UE: FAI:													
Comment: Two Electromagnetic gauging stations (buried coil): Chilbolton Main (151805001) and Chilbolton Back Carrier (151805002); flows are summed. Monthly c/m results substantially extend the overall record. Sensibly natural flow regime. # A Chalk catchment (limited superficial cover). Predominantly rural (some woodland), Whitchurch is the main settlement.		1996	656	81	346	91	4.96	8.1d	25/02	2.91	18/09	7.0	4.52	3.04
		1997	701	86	253	66	3.63	5.8	25/02	**2.23**	**03/10**	4.9	3.73	2.34
		1998	950	117	376	99	5.40	8.0	18/01	3.34	24/09	6.6	5.79	3.53
		1999	932	115	*441*	116	6.33					9.9	5.48	4.07
		2000	1098	135										
042012	**Anton at Fullerton** C.A: 185.0 km^2	**75-95**	**782**		**316**		**1.86**	**5.5d**	**01/02 1995**	**0.43**	**24/08 1976**	**2.8**	**1.69**	**0.96**
M.A: EA	Local No: 151806001 Sens.: 7.2 S/full: 8.5m^3s^{-1}													
F.A.R: N	Level: 41m UE: .02 FAI: 0.949													
Comment: Crump profile weir (crest: 4.75m broad) with a complementary Crump profile weir (crest: 1m broad) on a bypass channel. Water levels influenced by local mill sluice operation. Cress beds in headwaters. The gw catchment exceeds the topographical catchment area. Significant gw abstraction. # An unresponsive (Chalk) catchment of rolling downland - the upper reaches of the Anton are ephemeral. Land use: rural with some urban centres.		1996	639	82	280	89	1.64	2.7d	09/01	0.89	18/09	2.4	1.52	0.96
		1997	684	87	200	63	1.17	2.0	03/03	0.70	04/10	1.7	1.17	0.73
		1998	920	118	312	99	1.83	3.3	31/10	1.02	01/09	2.3	1.90	1.14
		1999	913	117	343	109	2.01	4.2	05/07	1.16	13/09	3.0	1.78	1.27
		2000	1086	139										
042020	**Tadburn Lake at Romsey** C.A: 19.0 km^2	**77..95**	**811**		**513**		**0.31**	**3.0d**	**07/02 1990**	**0.01**	**30/11 1978**	**0.7**	**0.23**	**0.04**
M.A: EA	Local No: 151815001 Sens.: 21.4													
F.A.R: N	Level: 16m UE: FAI:													
Comment: Velocity-area station. Concrete channel. Calibration ongoing. Hydrological research (mostly in the headwaters) undertaken initially by Southampton University. # Rural headwaters, with considerable woodland, but urbanised in lower reaches (Romsey). A largely impervious catchment developed mostly on Tertiary formations (principally Barton, Bracklesham and Bagshot Beds).		1996	673	83	271	53	0.16	2.8	09/01	0.03	15/09	0.6	0.09	0.04
		1997	750	92	156	30	0.09	1.7	28/11	0.03	21/08	0.2	0.06	0.03
		1998	877	108	231	45	0.14	2.4	05/01	0.01	29/08	0.3	0.10	0.01
		1999	871	107	534	104	0.32	**9.9**	**24/12**	0.09	13/09	0.5	0.26	0.11
		2000	1148	142										

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
042004 Test at Broadlands C.A: 1040.0 km^2	**57..95**	**811**		**335**		**11.06**	**36.6d**	**11/01 1961**	**3.17**	**07/07 1976**	**16.7**	**9.89**	**5.88**
M.A: EA Local No: 151816001 Sens.: B/full: 26.5m^3s^{-1}													
F.A.R: N Level: 10m UE: FAI:													
Comment: Velocity-area station, difficult to calibrate - severe weed growth and an uneven velocity distribution. Hence flows from 42013 (EM) often used to estimate or infill the Broadlands record. Primarily baseflow but some rapid runoff from the lower reaches of the Dun catchment. Topographic catchment slightly exceeds the drainage area. Considerable fish farming activity but sensibly natural flow regime. # Highly permeable catchment (90% Chalk) but with some Tertiary deposits and alluvium in the lower valley. Downland given over to agriculture - a few urban centres.	1996	649	80	280	84	9.20	21.9d	09/01	5.05	06/08	13.6	8.48	5.30
	1997	712	88	215	64	7.07	15.7d	18/02	4.47	01/10	9.8	6.62	4.91
	1998	930	115	321	96	10.59	22.3d	05/01	6.38	31/08	14.2	10.85	6.74
	1999	912	112	353	105	11.63	32.8d	20/01	6.61	31/07	17.5	9.99	6.96
	2000	1109	137	450	134	14.81	28.2d	13/12	8.00	01/09	23.1	13.97	8.29
042014 Blackwater at Ower C.A: 104.7 km^2	**76..95**	**867**		**263**		**0.87**	**10.2**	**26/01 1984**	**0.10**	**07/08 1989**	**2.2**	**0.46**	**0.16**
M.A: EA Local No: 151817001 Sens.: 25.0 B/full: 10.0m^3s^{-1}													
F.A.R: N Level: 8m UE: <.01 FAI: 0.985													
Comment: Crump profile weir (crest: 6m broad); drowns at approx. 0.4m but velocity-area calibration used for medium and high flows up to 1.85m (approx. 10.2 m^3s^{-1}) includes allowance for floodplain discharge but, latterly, peaks truncated. Negligible net impact of artificial influences on the flow pattern (very minor amount of spray irrigation). # A catchment of meadows, woodland and heath underlain by Tertiary sands, gravels and clays (mainly impervious).	1996	712	82	185	70	0.61	6.2	19/11	0.12	17/09	1.2	0.38	0.14
	1997	814	94	156	59	0.52	2.8	31/12	0.12	29/07	1.4	0.26	0.13
	1998	976	113	283	108	0.94	6.0	10/12	0.15	19/08	2.4	0.49	0.16
	1999	950	110	261	99	0.87	6.0	23/12	0.14	30/07	2.2	0.43	0.15
	2000	1193	138										
042003 Lymington at Brockenhurst C.A: 98.9 km^2	**60..95**	**849**		**318**		**1.00**	**14.9**	**10/12 1977**	**0.01**	**09/08 1976**	**2.6**	**0.43**	**0.05**
M.A: EA Local No: 150509001 Sens.: 18.3 B/full: 7.9m^3s^{-1}													
F.A.R: N Level: 6m UE: FAI:													
Comment: Compound thin-plate weir, width 7.3m, Theoretically rated; gaugings used to extent rating to c30m^3s^{-1} in 2000. Bypassing occurs above 7 m^3s^{-1}; Most pre-1999 flows truncated at approx. 10 m^3s^{-1}. Pre-1996: a thin-plate weir with V notch (no divide piers) - total breadth 8.48m. Artificial influences have a negligible impact on flows, but drainage has a long history (and some wetland restoration began in 1997). # Principally an impervious catchment (Tertiary clay; sand and gravel). Large tracts of heathland and forest - with valley bogs in the New Forest (where some recent village growth).	1996	768	90				10.7d	12/02					
	1997	850	100	298	94	0.94	*15.2*	*28/11*	0.04	23/07	2.9	0.29	0.06
	1998	987	116	385	121	1.21	8.2	09/12	0.05	22/08	3.3	0.57	0.07
	1999	975	115	363	114	1.14	**18.1d**	**24/12**	0.05	28/07	2.5	0.50	0.06
	2000	1174	138	593	186	1.86	**24.3**	**06/11**	0.07	12/08	5.4	0.64	0.09
101005 Eastern Yar at Budbridge C.A: 22.5 km^2	**82..95**	**813**		**296**		**0.21**	**8.7**	**30/12 1993**	**0.05**	**13/07 1990**	**0.4**	**0.14**	**0.07**
M.A: EA Local No: 51002001 Sens.: 22.9													
F.A.R: PGI Level: m UE: FAI:													
Comment: Flat V weir, cross-slope 1:10, 2.98m wide. Limited head for extended periods. Runoff reduced by surface and groundwater abstractions. From 1989, low flows augmented as part of the Isle of Wight Conjunctive Use Scheme. # The Eastern Yar rises on the Chalk of St. Catherine's Down, below the headwaters Upper Greensand and Gault Clay dominate. Very rural, Godshill is the main settlement.	1996	721	89	240	81	0.17	3.6	11/02	0.05	22/07	0.3	0.12	0.07
	1997	789	97	232	78	0.17	*3.8*	*28/11*	**0.03**	**23/07**	0.4	0.12	0.05
	1998	929	114	325	110	0.23	4.8	09/12	0.07	23/09	0.4	0.14	0.09
	1999	869	107	297	100	0.21	8.3	24/12	0.06	27/07	0.4	0.14	0.07
	2000	1142	140	472	159	0.34	**9.0**	**09/10**	0.07	20/07	0.7	0.17	0.08
101004 Eastern Yar at Burnt House C.A: 59.6 km^2	**82..95**	**827**		**208**		**0.39**	**7.9**	**21/01 1995**	**0.00**	**09/08 1984**	**0.8**	**0.19**	**0.04**
M.A: EA Local No: 51001001 Sens.: 50.0													
F.A.R: PG Level: m UE: FAI:													
Comment: Flat V weir, 1:10 cross slope. Limited head for long periods. Peak flows truncated at around 7.9 m^3s^{-1}. Runoff reduced by surface and gw abstractions. From 1989, low flows augmented as part of the IoW Conjunctive Use Scheme, but also regular abstraction u/s of 70-80 l/s. # The Eastern Yar rises as springs on the Chalk of St. Catherine's Down, Lower Greensand dominates the lower catchment. Very rural.	1996	733	89	168	81	0.32	7.9	12/02	0.03	25/07	0.6	0.19	0.05
	1997	822	99										
	1998	941	114	304	146	0.57	7.5	10/12	0.06	22/08	0.9	0.27	0.08
	1999	861	104	250	120	0.47	7.5	18/12	0.04	26/07	0.8	0.23	0.05
	2000	1165	141										

Map 9: SOUTH WEST



Area: 20,802 km^2

Average Rainfall (1961–90): 1028 mm

Gauging Station Register

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m³s⁻¹)	Min. mon. flow (m³s⁻¹)	Month/Year of min.	Median ann. flood (m³s⁻¹)	Base Flow Index	10 Percentile (m³s⁻¹)	95 Percentile (m³s⁻¹)
043014	East Avon	Upavon	SU 133559	36.2	C	1971..00	786	699	87	**1132**	00	432	76	0.80	0.35	08/76	3.8	.89	1.2	0.44
043017	West Avon	Upavon	SU 133559	76.0	C	1971–00	781	283	498	**547**	00	117	97	0.68	0.05	08/76	5.8	.72	1.6	0.11
043005	Avon	Amesbury	SU 151413	323.7	C	1965–00	777	340	437	**598**	00	139	76	3.49	0.37	08/76	12.6	.90	6.7	1.09
043015 *	Wylye	Longbr' Deverill	ST 868413	69.0	TP	1971..76	921								0.19	10/75		.94		
043012	Wylye	Norton Bavant	ST 909428	112.4	C	1971–00	950	312	638	**499**	00	183	76	1.11	0.28	07/76	4.7	.87	2.1	0.45
043024	Wylye	Stockton Park	ST 975393	254.8	EM	1994–97	893	286	607	391	95	186	97	2.31	0.69	10/96		.90	4.4	0.70
043008	Wylye	South Newton	SU 086343	445.4	C	1967–00	860	290	570	**506**	00	130	76	4.09	0.66	08/76	12.3	.90	8.6	1.15
043006	Nadder	Wilton	SU 098308	220.6	C	1966–00	916	414	502	**723**	00	219	73	2.90	0.60	08/76	15.2	.82	5.8	0.92
043004	Bourne	Laverstock	SU 157304	263.6	C	1965..00	790	91	699	169	95	36	76	0.76	0.07	08/76	2.3	.92	1.4	0.19
043011 *	Ebble	Bodenham	SU 165265	109.0	C VA	1970..76	845	223	622	292	72	198	73	0.77	0.06	09/70		.90	1.6	0.40
043003	Avon	East Mills	SU 158144	1477.8	MIS	1965..00	835	325	510	439	77	178	76	15.24	3.04	08/76	43.7	.91	28.8	5.50
043001 *	Avon	Ringwood	SU 143054	1649.8	VA	1960–65	809	383	426	496	61	244	64	20.06	5.89	11/64	61.3	.87	33.0	5.70
043021	Avon	Knapp Mill	SZ 156943	1706.0	US	1975..00	840	363	477	**514**	00	188	76	19.66	2.70	08/76		.90	39.4	6.38
043019	Shreen Water	Colesbrook	ST 807278	29.1	C	1973–00	909	592	317	**908**	00	**410**	97	0.55	0.16	08/76		.68	1.0	0.19
043009	Stour	Hammoon	ST 820147	523.1	CC	1968–00	875	453	422	**866**	00	154	73	7.52	0.35	08/76	117.0	.32	20.6	0.64
043010	Allen	Loverley Mill	SU 006085	94.0	C	1970..00	906	349	557	**625**	00	173	73	1.04	0.11	10/96	3.5	.89	2.6	0.17
043018	Allen	Watford Mill	SU 008007	176.5	C	1974–00	879	341	538	**602**	00	192	76	1.91	0.10	08/76	7.1	.91	4.5	0.30
043007	Stour	Throop	SZ 113958	1073.0	CC	1973–00	881	404	477	**683**	00	180	73	13.74	1.36	08/76	106.9	.65	31.1	2.61
043022 *	Moors River	Hurn Court	SZ 126969	143.3	C	1992–97	873	341	532	430	94	267	97	1.55	0.27	08/95		.66	3.4	0.38
043013 *	Mude	Somerford	SZ 184936	12.4	C	1971..83	791	252	539	323	77	158	73	0.10	0.00	08/76		.56	0.2	0.01
044002	Piddle	Baggs Mill	SY 913876	183.1	FL	1963..00	977	417	560	**602**	00	229	73	2.42	0.43	08/76	8.3	.89	4.8	0.78
044006	Sydling Water	Sydling St Nich's	SY 632997	12.4	C	1969–00	1086	478	608	**738**	00	262	73	0.19	0.05	08/76	0.8	.88	0.4	0.06
044004	Frome	Dorchester Total	SY 708903	206.0	C	1971..00	1044	470	574	639	94	249	73	3.07	0.35	08/76	15.6	.83	6.1	0.87
044008	S Winterbourne	W'borne Steep'ton	SY 629897	19.9	FV	1974..00	1090	151	939	235	94	55	76	0.09	0.01	08/76	0.4	.89	0.2	0.01
044001	Frome	East Stoke Total	SY 866867	414.4	MIS	1965..00	1009	487	522	695	66	300	73	6.41	1.25	08/76		.85	12.1	2.17
044009	Wey	Broadwey	SY 666839	7.0	FV	1975..00	911	1419		2171	94	847	89	0.31	0.07	10/90	1.7	.94	0.7	0.09
044003	Asker	Bridport	SY 470928	49.1	CC	1966..00	997	383	614	**566**	00	197	73	0.60	0.14	08/76	12.3	.63	1.1	0.20
045004	Axe	Whitford	SY 262953	288.5	CC	1964–00	1019	565	454	**763**	99	291	73	5.17	0.55	08/76	101.4	.49	11.0	1.21
045008	Otter	Fenny Bridges	SY 115986	104.2	VA	1974–00	1072	646	426	**913**	00	439	75	2.13	0.28	08/76	53.3	.49	4.5	0.52
045013	Tale	Fairmile	SY 088972	34.4	VA	1978..00	929	384	545	463	82	280	85	0.42	0.08	08/94		.52	0.8	0.12
045005	Otter	Dotton	SY 087885	202.5	FVVA	1962–00	997	490	507	**655**	00	322	73	3.14	0.54	08/76	72.0	.53	6.3	0.95
045006 *	Quarme	Enterwell	SS 919356	20.4	CB	1964–67	*1750*	1073	677	1178	65	1043	66	0.69	0.12	08/67	9.8	.59	1.5	0.19
045010 *	Haddeo	Hartford	SS 952294	50.0		1973–79	1226	695	531	1027	74	533	73	1.10	0.03	08/76		.56	2.5	0.08
045009	Exe	Pixton	SS 935260	159.7	VA	1966–00	1456	909	547	**1405**	00	545	73	4.60	0.15	08/76	41.4	.51	11.5	0.63
045011	Barle	Brushford	SS 927258	128.0	VA	1968..99	1607	1157	450	**1607**	99	893	76	4.70	0.30	08/76	85.7	.54	10.8	0.60
045002	Exe	Stoodleigh	SS 943178	421.7	VA	1960..00	1408	945	463	**1318**	00	644	64	12.64	0.62	08/76	138.9	.52	29.5	1.66
045001	Exe	Thorverton	SS 936016	600.9	FVVA	1956–00	1298	850	448	**1250**	00	509	64	16.19	0.69	08/76	175.3	.50	38.9	1.95
045003	Culm	Wood Mill	ST 021058	226.1	FVVA	1962–00	987	523	464	**739**	00	318	64	3.75	0.57	08/76	68.2	.53	7.9	1.02
045012	Creedy	Cowley	SX 901967	261.6	VA	1964..00	924	453	471	660	74	276	75	3.75	0.15	08/76	93.8	.46	9.0	0.32
046002	Teign	Preston	SX 856746	381.0	VA	1956–00	1280	771	509	1298	60	431	75	9.32	0.47	08/76	133.4	.55	22.5	1.14
046005	East Dart	Bellever	SX 657775	21.5	VA	1964–00	2112	1835	277	2604	74	1185	76	1.25	0.10	08/76	39.1	.44	2.7	0.19
046007	West Dart	Dunnabridge	SX 643742	47.9	VA	1972..00	2140	1736	404	**2334**	98	1078	73	2.64	0.20	08/76	75.7	.45	5.9	0.35
046003	Dart	Austins Bridge	SX 751659	247.6	VA	1958–00	1865	1430	435	**1993**	00	930	75	11.23	0.71	08/76	213.1	.52	25.1	1.49
046008	Avon	Loddiswell	SX 719476	102.3	VA	1971..00	1605	1044	561	1525	94	625	73	3.39	0.20	08/95	65.0	.52	8.1	0.41
046006	Erme	Ermington	SX 642532	43.5	VA	1973–00	1800	1389	411	1825	94	867	75	1.92	0.11	08/76	47.2	.49	4.4	0.25
047007	Yealm	Puslinch	SX 574511	54.9	FLVA	1963–00	1469	961	508	1359	94	518	73	1.67	0.06	08/76	22.7	.55	3.8	0.20
047011	Plym	Cam Wood	SX 522613	79.2	CC	1971..00	1552	909	643	1312	74	521	73	2.28	0.16	08/76	45.6	.50	5.4	0.30
047010	Tamar	Crowford Bridge	SX 290991	76.7	CC	1972–00	1230	930	300	1599	74	**530**	97	2.26	0.03	08/84	54.9	.29	5.0	0.09
047002 *	Tamar	Werrington	SX 343886	232.1	VA	1956–61	*1143*	793	350	1119	60	587	57	5.84	0.04	09/59		.33	15.6	0.13
047005	Ottery	Werrington Park	SX 337866	120.7	VA	1963..00	1253	783	470	**1310**	00	374	64	3.00	0.02	08/95	60.0	.40	7.7	0.16
047019	Tamar	Polson Bridge	SX 353849	470.3	VA	1989..00	1261	736	525	970	94	**546**	97	10.98	0.26	08/95		.39	28.5	0.54
047018	Thrushel	Hayne Bridge	SX 416867	57.6	VA	1989–00	1237	785	452	**1240**	00	**497**	97	1.43	0.01	08/95		.38	3.8	0.04
047017	Wolf	Combe Park Farm	SX 419898	31.1		1977–99	1210	723	487	929	81	**439**	98	0.71	0.00	07/77		.42	1.8	0.02
047008	Thrushel	Tinhay	SX 398856	112.7	CC	1969–00	1195	665	530	1051	74	**375**	97	2.38	0.02	08/76	43.1	.42	6.1	0.11
047006	Lyd	Lifton Park	SX 389842	222.9	FLVA	1963..00	1285	727	558	**1045**	00	484	64	5.14	0.21	08/76	122.8	.52	12.3	0.62
047001	Tamar	Gunnislake	SX 426725	916.9	VA	1956–00	1259	782	477	1200	74	431	64	22.73	0.76	08/76	264.9	.46	56.2	2.07
047016	Lumburn	Lumburn Bridge	SX 459732	20.5	VA	1976..00	1344	857	487	**1269**	00	634	87	0.56	0.05	08/76		.63	1.3	0.07
047014	Walkham	Horrabridge	SX 513699	44.6	MIS	1976–00	1730	1264	466	**1689**	00	921	89	1.79	0.18	08/76	29.4	.61	3.8	0.36
047015	Tavy	Denham / Ludbrook	SX 476681	197.3	MIS	1981–00	1660	1073	587	**1605**	00	835	83	6.72	0.72	08/83		.52	16.5	0.93
047003 *	Tavy	Lopwell	SX 475652	205.9	MIS	1957..80	1563	898	665	1125	58	853	78	5.87	0.26	08/76		.48	15.2	0.54
047013	Withey Brook	Bastreet	SX 244784	16.2	CC	1972..00	1752	1193	559	1956	74	816	89	0.61	0.06	09/96		.56	1.4	0.10
047004	Lynher	Pillaton Mill	SX 369626	135.5	VA	1963..00	1473	1062	411	1575	74	679	64	4.56	0.34	08/76	45.3	.60	10.4	0.68
047009	Tiddy	Tideford	SX 344596	37.2	C	1969–00	1321	799	522	**1150**	00	505	73	0.94	0.08	08/76	5.7	.61	2.3	0.14
048010	Seaton	Trebrownbridge	SX 299595	39.1	CC	1957..00	1389	832	557	1140	74	527	71	1.03	0.15	08/76	6.4	.73	2.3	0.22
048001	Fowey	Trekeivesteps	SX 227698	36.8	CC	1957..00	1700	1189	511	**1768**	00	808	76	1.39	0.12	09/59	15.9	.63	3.0	0.25
048009	St Neot	Craigshill Wood	SX 184662	22.7	CC	1971–00	1574	1050	524	1645	74	**709**	97	0.76	0.08	08/76	8.4	.68	1.4	0.18
048004	Warleggan	Trengoffe	SX 159674	25.3	CC	1969–00	1497	1057	440	**1690**	00	762	89	0.85	0.12	08/76	9.1	.72	1.7	0.19
048011	Fowey	Restormel	SX 098624	169.1	CC	1961–00	1519	917	602	1388	74	633	89	4.92	0.34	08/76	43.7	.63	11.1	0.81
048002 *	Fowey	Restormel one	SX 108613	171.2	VA	1961..84	1494	939	555	1337	74	468	75	5.09	0.23	08/75	54.5	.65	10.5	1.12
048003 *	Fal	Tregony	SW 921447	87.0	FLVA	1978–00	1295	766	529	**1082**	00	546	89	2.11	0.35	08/89	13.4	.66	4.6	0.45
048005	Kenwyn	Truro	SW 820450	19.1	CC	1968–00	1141	644	497	994	94	434	71	0.39	0.03	08/76	5.6	.67	0.9	0.05
048007	Kennal	Ponsanooth	SW 762377	26.5	C	1968–00	1350	614	736	902	94	364	89	0.52	0.04	09/90	3.9	.68	1.2	0.08
048006 *	Cober	Helston	SW 654273	40.1	VA	1968–89	1272	779	493	1055	79	580	83	0.99	0.09	08/84	5.2	.74	2.1	0.17
049002	Hayle	St Erth	SW 549341	47.6	CC	1957..00	1124	676	448	882	93	433	71	1.02	0.17	08/76	4.5	.83	2.2	0.23
049004	Gannel	Gwills	SW 829593	41.0	C	1969–00	1082	545	537	735	74	376	89	0.71	0.07	08/76	14.0	.69	1.6	0.10
049003	De Lank	De Lank	SX 133765	21.5	CC	1967..00	1695	1128	567	**1613**	00	798	76	0.77	0.03	08/76	13.6	.57	1.7	0.09
049001	Camel	Denby	SX 017682	208.8	VA	1964–00	1419	922	497	**1448**	00	616	71	6.10	0.42	08/76	53.1	.62	13.7	0.89
050005	West Okement	Vellake	SX 557903	13.3	MIS	1975..00	2110	1643	467	**2170**	00	1103	76	0.69	0.06	07/89	23.9	.31	1.7	0.08
050011	Okement	Jacobstowe	SS 592019	82.1	MIS	1973..00	1534	1006	528	1495	74	692	76	2.62	0.14	08/76		.49	6.3	0.34
050009	Lew	Norley Bridge	SX 501999	20.2	VA	1988–00	1312	831	481	**1179**	00	559	97	0.53	>0.00	08/95		.35	1.3	0.02

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
050008	Lew	Gribbleford Br	SS 528014	71.1	VA	1988–00	1287	717	570	**1002**	**00**	**448**	**97**	1.62	>0.00	08/95		.31	4.3	0.03
050010	Torridge	Rockhay Bridge	SS 507070	257.8	VA	1988–00	1352	922	430	**1375**	**00**	**678**	**96**	7.54	0.15	08/95		.35	19.7	0.34
050002	Torridge	Torrington	SS 500185	663.0	VA	1960..00	1203	762	441	1043	94	427	64	16.01	0.25	08/76	244.4	.38	40.5	0.89
050007	Taw	Taw Bridge	SS 673068	71.4	VA	1973..00	1275	872	403	1407	94	515	75	1.98	0.05	08/76	34.1	.47	5.1	0.15
050012	Yeo	Veraby	SS 775267	53.7	VA	1968..00	1361	995	366	1711	94	644	75	1.70	0.05	08/76		.42	3.8	0.16
050006	Mole	Woodleigh	SS 660211	327.5	VA	1965–00	1364	858	506	**1284**	**00**	558	75	8.91	0.32	08/76	261.1	.47	21.6	0.84
050001	Taw	Umberleigh	SS 608237	826.2	VA	1958–00	1180	705	475	1053	60	432	64	18.48	0.42	08/76	219.0	.43	48.5	1.22
051002	Horner Water	West Luccombe	SS 898458	20.8	C	1973..00	1524	725	799	**1029**	**00**	447	75	0.48	0.03	08/76	6.4	.60	1.1	0.06
051003	Washford	Beggearn Huish	ST 040395	36.3	FV	1966..00	1206	728	478	**1275**	**00**	335	73	0.84	0.03	10/78	5.9	.62	2.1	0.12
051001	Doniford St	Swill Bridge	ST 088428	75.8	FV	1967..00	950	442	508	**773**	**00**	188	73	1.06	0.10	08/76	12.2	.66	2.4	0.20
052020 *	Gallica St	Gallica Bridge	ST 571100	16.4	MIS	1966..78	948	465	483	623	67	263	75	0.24	>0.00	08/76	20.3	.27	0.5	0.01
052002 *	Yeo	Sutton B' Res	ST 555106	30.3	MIS	1956–68	998	411	587	752	60	146	64	0.40	0.03	07/65		.19	1.3	
052006	Yeo	Pen Mill	ST 573161	213.1	C VA	1963–00	904	375	529	**629**	**00**	162	73	2.53	0.17	08/76	43.8	.42	6.3	0.33
052007	Parrett	Chiselborough	ST 461144	74.8	C	1966–00	929	508	421	**960**	**00**	238	73	1.20	0.09	08/76	27.6	.41	2.4	0.18
052004	Isle	Ashford Mill	ST 361188	90.1	C VA	1962–00	912	474	438	**737**	**00**	176	64	1.35	0.15	08/76	26.2	.47	3.0	0.27
052008 *	Tone	Clatworthy Res	ST 043312	18.1	MIS	1960–68	1275	559	716	671	66	204	64	0.32	0.06	08/67		.46	0.9	0.06
052014	Tone	Greenham	ST 078202	57.2	FVVA	1967..00	1150	578	572	964	70	400	89	1.05	0.01	10/75	14.2	.61	2.4	0.14
052005	Tone	Bishops Hull	ST 206250	202.0	C VA	1961–00	1006	492	514	**738**	**00**	250	64	3.15	0.27	08/76	66.7	.58	6.8	0.61
052025	Hillfarrance	Milverton	ST 113270	27.8	FV	1992–00	1186	640	546	807	99	489	96	0.56	0.10	08/95		.68	1.3	0.13
052003	Halsewater	Halsewater	ST 206253	87.8	FV	1961..00	893	407	486	**668**	**00**	182	73	1.13	0.18	08/76	9.7	.72	2.3	0.28
052016	Currypool St	Currypool Farm	ST 221382	15.7	C VA	1971–00	947	434	513	**649**	**00**	225	73	0.22	0.04	08/76	2.6	.71	0.4	0.06
052011	Cary	Somerton	ST 498291	82.4	CCVA	1965–00	751	313	438	**571**	**00**	180	75	0.82	0.01	08/76	10.0	.37	2.1	0.05
052026	Alham	Higher Alham	ST 679411	5.1	FV	1983..00	1055	905	150	**1441**	**00**	**579**	**97**	0.15	0.01	09/84		.77	0.3	0.03
052010	Brue	Lovington	ST 590318	135.2	C VA	1964..00	902	445	457	**780**	**00**	269	73	1.91	0.13	08/76	48.0	.47	4.4	0.24
052009	Sheppey	Fenny Castle	ST 498439	59.6	C VA	1964..00	977	582	395	**956**	**00**	337	64	1.10	0.17	09/64	7.5	.67	2.3	0.26
052001 *	Axe	Wookey	ST 527458	18.2	FL	1956–68	1176	988	188	1260	60	688	59	0.57	0.08	10/59		.70	1.1	0.12
052017	Congresbury	Iwood	ST 452631	66.6	C	1973..00	1009	382	627	**709**	**00**	237	90	0.81	0.17	08/95	7.7	.67	1.7	0.22
052015	Land Yeo	Wraxall Bridge	ST 483716	23.3	C	1971..00	952	357	595	**658**	**00**	215	73	0.26	0.03	08/76	2.5	.69	0.6	0.05
053023	Sherston Avon	Fosseway	ST 891870	89.7	FV	1976..00	873	350	523	**549**	**00**	217	90	1.00	0.09	10/79	6.9	.65	2.4	0.12
053024	Tetbury Avon	Brokenborough	ST 914893	73.6	FV	1978–00	865	301	564	**446**	**00**	**148**	**97**	0.70	0.04	10/90		.61	1.7	0.06
053019	Woodbr' Brk	Crab Mill	ST 946866	46.6	TP	1969–00	763	393	370	**945**	**00**	131	73	0.58	0.00	08/76	22.1	.33	1.1	0.03
053020	Gauze Brook	Rodbourne	ST 937840	28.2	TP	1968–00	809	311	498	**532**	**00**	117	73	0.28	>0.00	08/76	3.6	.51	0.7	0.02
053008	Avon	Great Somerford	ST 966832	303.0	CC	1964–00	834	349	485	**574**	**00**	140	73	3.36	0.15	08/76	36.8	.58	8.2	0.34
053013	Marden	Stanley	ST 955729	99.2	FL	1970–00	771	387	384	**675**	**00**	199	73	1.22	0.13	08/76	15.0	.64	2.6	0.25
053001 *	Avon	Melksham	ST 903641	665.6	VA	1953–80	779	316	463	528	60	118	73	6.67	0.55	10/55	59.6	.55	15.1	0.98
053015 *	Spring Flow	Tiswell	ST 902524	0.0	VN	1973–77					75		76	0.58	0.25	09/76		.94	0.8	0.26
053002	Semington B	Semington	ST 907605	157.7	VA	1953–00	748	292	456	**605**	**00**	130	73	1.46	0.19	07/76	25.9	.56	2.8	0.28
053029	Biss	Trowbridge	ST 857576	77.6	FV	1984–00	795	338	457	**531**	**00**	**172**	**97**	**0.83**	**0.11**	**09/96**		.50	2.0	0.13
053016 *	Spring Flow	Dunkerton	ST 803399	1.2	VN	1973–79	955				78		73	9.05	4.57	10/73		.74	15.6	4.49
053025	Mells	Vallis	ST 757491	119.0	C	1980–00	1107	456	651	753	**00**	**324**	**97**	1.72	0.17	08/89	20.8	.57	4.0	0.22
053007	Frome	Tellisford	ST 805564	261.6	FL	1961–00	979	460	519	**759**	**00**	281	64	3.82	0.29	08/76	58.0	.53	8.8	0.61
053009	Wellow Brk	Wellow	ST 741581	72.6	FL	1966–00	1035	568	467	**867**	**00**	331	73	1.31	0.12	08/76	13.5	.62	2.9	0.24
053005	Midford Brk	Midford	ST 763611	147.4	FL	1961..00	994	488	506	**814**	**00**	284	73	2.28	0.22	08/76	28.3	.61	5.1	0.42
053028	By Brook	Middlehill	ST 813688	102.0	FV	1982–00	903	506	397	**780**	**00**	313	90	1.64	0.16	09/90		.65	4.1	0.23
053018	Avon	Bathford	ST 785670	1552.0	VA	1969–00	850	362	488	**703**	**00**	211	73	17.80	1.72	08/76	167.0	.59	39.8	2.88
053003 *	Avon	Bath St James	ST 751651	1595.0	VA	1939..69	837	400	437	605	66	221	42	20.24	1.15	07/41	127.7	.63	43.8	2.32
053022 *	Avon	Bath ultrasonic	ST 738651	1605.0	US	1976–84	903	437	466	492	82	366	78	22.22	4.03	07/84		.59	49.1	4.50
053017 *	Boyd	Bitton	ST 681698	47.9	FV	1973–00	821	371	450	**571**	**00**	238	90	0.56	0.02	08/76	12.6	.46	1.4	0.05
053004	Chew	Compton Dando	ST 648647	129.5	FL	1958..00	1024	284	740	**623**	**00**	132	64	1.17	0.20	08/76	29.8	.61	2.4	0.33
053026	Frome(Bristol)	Frampton Cott'll	ST 667822	78.5	C	1978–00	844	425	419	**697**	**99**	238	90	1.06	0.07	08/90		.42	2.6	0.11
053006	Frome(Bristol)	Frenchay	ST 637772	148.9	FL	1961–00	820	364	456	559	**00**	170	73	1.72	0.12	07/76	29.0	.39	4.2	0.20
054088	Little Avon	Berkeley Kennels	ST 683988	134.0	VA	1978–00	844	256	588	**450**	**00**	173	91	1.09	**0.14**	**08/98**	27.7	.57	2.2	0.22

Hydrometric Statistics

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
043014	**East Avon at Upavon** C.A: 36.2 km^2	71..95	776		689		0.79	6.2	03/02 1990	0.30	26/08 1976	1.2	0.68	0.44
M.A: EA	Local No: 432110 Sens.: 9.3 S/full: 6.0m^3s^{-1}													
F.A.R: N	Level: 92m UE: .02 FAI: 1.000													
Comment: Crump profile weir, crest 3.05m broad. Station adjacent to West Avon at Upavon (43017); the two weirs gauge the two branches of the Avon immediately u/s of their confluence at Upavon. Full range station. Occasional u/s hatch action. # Predominantly Upper Greensand and Lower Chalk; some Gault. Upper Chalk and clay form N and extreme S borders of catchment. Land use: predominantly pastoral.		1996	621	80	627	91	0.72	2.2	08/01	0.44	08/08	1.0	0.62	0.47
		1997	693	89	446	65	0.51	1.5	20/11	0.35	21/07	0.7	0.51	0.37
		1998	912	118	711	103	0.82	2.8	25/12	0.47	20/08	1.1	0.73	0.50
		1999	883	114	817	119	0.94	3.6	24/12	0.52	01/08	1.5	0.78	0.57
		2000	1084	140	1135	165	1.30	6.4	30/10	0.69	25/08	2.1	1.08	0.74
043017	**West Avon at Upavon** C.A: 76.0 km^2	71..95	769		277		0.67	11.0	03/02 1990	0.02	27/08 1976	1.5	0.40	0.11
M.A: EA	Local No: 432120 Sens.: 27.5 S/full: 9.2m^3s^{-1}													
F.A.R: G	Level: 92m UE: .02 FAI: 1.000													
Comment: Crump profile weir, crest 4.57m broad. Station adjacent to East Avon at Upavon (43014); the two weirs gauge the two branches of the Avon immediately u/s of their confluence at Upavon. Full range station. Minor gw abstractions in catchment. # Predominantly Upper Greensand and Lower Chalk; some Gault. Upper Chalk and clay form N and extreme S borders of catchment. Land use: rural.		1996	598	78	200	72	0.48	3.1	24/02	0.10	17/09	1.1	0.28	0.11
		1997	683	89	117	42	0.28	2.0	26/12	0.07	20/08	0.6	0.20	0.10
		1998	912	119	367	132	0.89	4.5	05/01	0.23	11/08	1.7	0.64	0.25
		1999	900	117	332	120	0.80	7.0	24/12	0.15	31/07	1.7	0.55	0.20
		2000	1088	141	549	198	1.32	10.6	30/10	0.28	07/09	2.6	0.93	0.30

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
043005	**Avon at Amesbury** C.A: 323.7 km^2	**65..95**	**772**		**337**		**3.46**	**28.5**	**04/02 1990**	**0.17**	**22/08 1976**	**6.6**	**2.76**	**1.12**
M.A: EA	Local No: 432130 Sens.: 9.8 B/full: 1.4m^3s^{-1}													
F.A.R: G	Level: 67m UE: .02 FAI: 1.000													
Comment: Crump profile weir (crest 9.14m broad) flanked by broad-crested weirs. Small bypass channel approx. 2m u/s of weir - included in rating. Full range station. During summer, flows are naturally augmented from gw draining from northern half of R. Bourne catchment. Some gw pumping also takes place within the catchment. # Predominantly permeable (Chalk) catchment with a small inlier of Upper Greensand and Gault. Land use: rural. Topographical and gw catchments do not coincide.		1996	605	78	278	82	2.85	7.4	12/02	0.89	19/09	5.4	1.98	0.99
		1997	672	87	157	47	1.61	4.4	27/12	0.70	05/10	2.6	1.47	0.79
		1998	887	115	372	110	3.82	11.8	06/01	1.29	08/10	6.0	3.76	1.50
		1999	874	113	381	113	3.91	14.4d	20/01	1.37	15/09	7.8	2.93	1.54
		2000	1071	139	600	178	6.14	26.0	08/12	1.93	13/09	10.4	5.50	2.21
043012	**Wylye at Norton Bavant** C.A: 112.4 km^2	**71..95**	**937**		**307**		**1.09**	**7.3**	**03/02 1990**	**0.23**	**10/07 1976**	**2.1**	**0.81**	**0.44**
M.A: EA	Local No: 432320 Sens.: 14.8 S/full: 13.0m^3s^{-1}													
F.A.R: GE	Level: 97m UE: .02 FAI: 0.978													
Comment: Crump profile weir, crest 6.09m broad. Full range station. Out-of-bank flow may occur just u/s before bankfull at gauging station. Substantial groundwater abstractions and hatcheries u/s affect flow. Some augmentation from effluent returns. # Geology: Chalk with Upper Greensand and Gault in higher parts of catchment. Land use: rural.		1996	771	82	273	89	0.97	3.2	12/02	0.44	31/08	1.7	0.77	0.49
		1997	855	91	213	69	0.76	2.7	17/02	0.41	30/09	1.4	0.61	0.45
		1998	1083	116	348	113	1.24	5.7	31/10	0.49	20/09	2.4	1.06	0.53
		1999	1074	115	351	114	1.25	5.9	26/12	0.49	23/08	2.5	0.95	0.53
		2000	1296	138	500	163	1.78	7.0	30/10	0.56	10/09	3.2	1.54	0.63
043008	**Wylye at South Newton** C.A: 445.4 km^2	**67-95**	**848**		**288**		**4.06**	**29.8**	**02/02 1995**	**0.56**	**26/08 1976**	**8.6**	**2.99**	**1.17**
M.A: EA	Local No: 432330 Sens.: 7.4 B/full: 36.9m^3s^{-1}													
F.A.R: N	Level: 56m UE: .01 FAI: 0.977													
Comment: Crump profile weir, crest 10.7m broad. Full range station. Subject to drowning at high discharges. Heavy weed growth during summer months. Sluice control u/s for river regulation. # Predominantly Chalk with Upper Greensand and Gault in higher parts of catchment. Land use: rural.		1996	690	81	228	79	3.22	8.8	12/02	0.97	13/10	6.6	2.06	1.05
		1997	783	92	152	53	2.15	5.2	31/12	0.86	03/11	4.1	1.73	0.97
		1998	985	116	329	114	4.65	14.8	08/01	1.36	15/10	8.5	4.23	1.47
		1999	1000	118	298	103	4.21	19.0d	20/01	1.06	13/09	10.4	2.68	1.19
		2000	1211	143	507	176	7.14	27.9	13/12	1.68	13/09	13.1	6.38	1.88
043006	**Nadder at Wilton** C.A: 220.6 km^2	**66-95**	**906**		**406**		**2.84**	**47.9**	**28/12 1979**	**0.49**	**24/08 1976**	**5.7**	**2.11**	**0.91**
M.A: EA	Local No: 432210 Sens.: 18.8 B/full: 43.0m^3s^{-1}													
F.A.R: N	Level: 51m UE: <.01 FAI: 0.979													
Comment: Crump weir, crest 18.3m broad. Crest tapping in operation for first few months and then abandoned - modular limit (0.6m) seldom reached. Flows greater than 18.3 m^3s^{-1} measured u/s of weir at Bull Bridge. Sluices and hatches can regulate flow for short periods. Minor groundwater pumping in catchment. # Mixed geology - predominantly Chalk with clays in upper catchment. Land use: rural.		1996	761	84	357	88	2.49	16.5	20/11	0.93	23/10	4.8	1.98	0.99
		1997	872	96	315	78	2.21	14.0	21/11	0.81	03/10	4.4	1.60	0.86
		1998	1013	112	463	114	3.24	22.4	05/01	0.98	23/09	6.7	2.59	1.08
		1999	1042	115	482	119	3.37	23.3	25/12	1.07	15/09	6.9	2.42	1.25
		2000	1228	136	725	179	5.06	34.9	06/11	1.30	09/09	9.5	4.25	1.49
043004	**Bourne at Laverstock** C.A: 263.6 km^2	**65..95**	**783**		**91**		**0.76**	**8.0**	**10/08 1989**	**0.05**	**27/08 1976**	**1.5**	**0.54**	**0.20**
M.A: EA	Local No: 432410 Sens.: 13.2 S/full: 8.6m^3s^{-1}													
F.A.R: N	Level: 46m UE: .02 FAI: 1.000													
Comment: Crump weir, crest 3m broad. Theoretically rated. Situated approx. 1.6m u/s of confluence with R. Avon. Out of bank flow may occur just u/s of station when flow exceeds 6 m^3s^{-1}. Bypass channel u/s of gauging station, but sluice is closed and no longer operates. Heavy weedgrowth during summer months, needs regular maintenance. # Permeable Chalk catchment. Land use rural with some small settlements.		1996	629	80	66	73	0.55	1.4	12/02	0.16	17/09	1.0	0.43	0.18
		1997	696	89	43	47	0.36	1.3	24/02	0.13	03/10	0.6	0.35	0.15
		1998	889	114	83	91	0.69	2.0	05/01	0.21	29/08	1.1	0.75	0.24
		1999	889	114	99	109	0.82	3.4	26/01	0.24	30/07	1.8	0.55	0.28
		2000	1104	141	166	182	1.38	6.7	12/12	0.26	13/09	2.2	1.08	0.33
043003	**Avon at East Mills** C.A: 1477.8 km^2	**65..95**	**833**		**329**		**15.41**	**62.5d**	**01/02 1995**	**2.52**	**26/08 1976**	**29.3**	**12.40**	**5.67**
M.A: EA	Local No: 432612 Sens.:													
F.A.R: N	Level: m UE: .01 FAI: 0.987													
Comment: Combined station: Critical depth rectangular flume (local no. 432610, C.A.:1477.8 sq.km) and complementary compound Crump profile weir with central notch fish pass (local no. 432620, C.A.:1448.0 sq.km). Low-medium flow range station. Small irrigation carrier is fed from R. Avon 3km u/s at Burgate and bypasses gauging station (normally >3% total flow). High flows are channelled along carrier and, generally, peak at East Mills is unrepresentative. High flow gauged from Fordingbridge bypass bridge. Pre-Sep 1965 flows for flume only. # Predominantly permeable (Chalk) catchment. Land use: rural.		1996	677	81	272	83	12.70	32.8d	09/01	4.91	16/10	23.0	9.86	5.19
		1997	767	92	202	61	9.47	24.6d	25/02	4.37	05/10	17.0	7.89	4.64
		1998	950	114	357	109	16.75	51.3d	07/01	6.19	23/09	28.1	15.52	6.60
		1999	957	115	361	110	16.91	53.3d	21/01	6.22	14/09	33.7	13.02	6.90
		2000	1159	139										
043021	**Avon at Knapp Mill** C.A: 1706.0 km^2	**75..95**	**824**		**364**		**19.71**	**99.5**	**19/09 1978**	**2.49**	**22/08 1976**	**39.0**	**15.47**	**6.44**
M.A: EA	Local No: 432820 Sens.: B/full: 55.0m^3s^{-1}													
F.A.R: P	Level: 1m UE: FAI:													
Comment: Ultrasonic station - dual path. The station level refers to mean bed level - 0.875m aOD. Both banks are piled and the bed is dredged to form a rectangular cross-section. Up to Aug 1988 - very limited number of flow readings logged per day. Monthly check gaugings confirm improved US performance. Substantial bypassing when flows in excess of 40-45 m^3s^{-1}. Some abstraction for PWS in catchment. # Mixed geology - predominantly Chalk; lower catchment composed of sands, gravels and clays. Land use: rural.		1996	688	83	302	83	16.29	49.3	10/01	5.59	18/09	30.5	12.35	6.12
		1997	777	94	231	63	12.48	38.9	26/02	5.42	05/10	22.8	10.31	5.74
		1998	954	116										
		1999	955	116	365	100	19.73	*51.8*	*20/01*	6.59	01/08	43.3	15.10	7.34
		2000	1160	141	515	141	27.81	63.3	12/12	8.13	13/09	46.8	28.24	9.19
043019	**Shreen Water at Colesbrook** C.A: 29.1 km^2	**73..95**	**893**		**586**		**0.54**	**21.2**	**30/05 1979**	**0.14**	**22/08 1976**	**1.0**	**0.38**	**0.19**
M.A: EA	Local No: 433110 Sens.: 10.0 B/full: 6.8m^3s^{-1}													
F.A.R: G	Level: 72m UE: FAI:													
Comment: Crump profile weir, crest 3m broad. Theoretically rated. Structure drowns at high flows below bankfull. Significant gw pumping in catchment. Some augmentation from effluent returns. Runoff figures suggest topographical and hydrological catchment areas do not coincide. Flashy response. # Predominantly Kimmeridge Clay. Some Chalk and Upper Greensand in the north of the catchment. Land use: agricultural.		1996	750	84	457	78	0.42	4.5	11/02	0.18	18/09	0.7	0.31	0.19
		1997	838	94	409	70	0.38	12.9	20/11	0.14	28/10	0.7	0.25	0.16
		1998	1029	115	644	110	0.59	14.8	03/11	0.22	23/09	1.0	0.39	0.25
		1999	1026	115	666	114	0.62	10.8	24/12	0.24	11/09	1.2	0.44	0.26
		2000	1248	140	911	155	0.84	22.9	29/10	0.29	07/09	1.5	0.59	0.32
043009	**Stour at Hammoon** C.A: 523.1 km^2	**68..95**	**861**		**432**		**7.16**	**231.4**	**27/12 1979**	**0.22**	**02/11 1975**	**19.7**	**2.25**	**0.62**
M.A: EA	Local No: 433410 Sens.: 136.0 S/full: 60.0m^3s^{-1}													
F.A.R: PG	Level: 41m UE: <.01 FAI: 0.993													
Comment: Compound Crump profile weir with low flow crest 6.1m broad, total breadth 18.3m. Structure situated under road bridge. High flows calibrated up to 3.1m. Water meadow system operates - area floods during high discharges; bypassing of station occurs and gaugings are made d/s at Haywoods Bridge (ST824120). Severe weed growth affects flow. Substantial ground and surface water abstractions within the catchment. # Predominantly impermeable (clay) catchment. Rural land use.		1996	759	88	388	90	6.41	110.8	09/02	0.56	23/07	15.0	2.06	0.63
		1997	842	98	397	92	6.58	102.8	20/11	0.60	22/07	19.2	1.56	0.67
		1998	988	115	584	135	9.69	132.3	01/11	0.71	09/08	27.6	3.06	0.82
		1999	980	114	631	146	10.47	157.6	24/12	0.69	31/07	30.4	3.05	0.85
		2000	1187	138	868	201	14.36	186.8	30/10	0.73	02/08	39.7	5.00	1.05
043010	**Allen at Loverley Mill** C.A: 94.0 km^2	**70..95**	**888**		**343**		**1.02**	**8.1d**	**19/02 1990**	**0.08**	**07/09 1990**	**2.6**	**0.58**	**0.17**
M.A: EA	Local No: 433530 Sens.: 12.2													
F.A.R: PGE	Level: 37m UE: <.01 FAI: 0.979													
Comment: Crump weir situated under old mill house. Calculation of flows only possible under finite hatch settings at u/s hatches controlling flow into old mill pond. Frequent hatch action. Station full-range. # Chalk catchment. Rural.		1996	769	87	234	68	0.70	2.2	24/01	0.10	15/10	1.7	0.48	0.11
		1997	864	97	214	62	0.64	2.4	18/12	0.18	02/08	1.6	0.44	0.20
		1998	997	112	420	122	1.25	6.7	13/01	0.22	22/09	2.6	0.86	0.25
		1999	981	110	357	104	1.06	6.7	25/01	0.22	04/09	2.6	0.63	0.24
		2000	1217	137	627	183	1.86	7.4	14/12	0.24	13/09	4.0	1.41	0.27
043018	**Allen at Walford Mill** C.A: 176.5 km^2	**74..95**	**866**		**334**		**1.87**	**13.1**	**14/02 1990**	**0.07**	**23/08 1976**	**4.5**	**1.16**	**0.29**
M.A: EA	Local No: 433540 Sens.: 19.4 B/full: 14.1m^3s^{-1}													
F.A.R: PG	Level: 19m UE: <.01 FAI: 0.976													
Comment: Two Crump profile weirs: main channel weir crest 6.1m broad; secondary weir in mill stream adjacent to main channel - 0.9m broad. Rating includes mill channel. Weed growth occasionally causes structure to drown out. Hatch activity u/s of station. Minor surface and gw abstractions in catchment. Compensation discharge maintains low flows. # Upper catchment - Chalk, lower catchment - sands, gravels and clays. Land use: predominantly rural.		1996	761	88	258	77	1.44	5.4	12/02	0.24	08/08	3.3	1.15	0.28
		1997	850	98	229	69	1.28	5.0	24/12	0.35	02/08	2.9	0.93	0.42
		1998	975	113	405	121	2.27	9.8	13/01	0.46	01/09	4.7	1.82	0.54
		1999	940	109	344	103	1.93	9.2	19/01	0.38	01/08	5.0	1.11	0.44
		2000	1185	137	604	181	3.37	17.3	12/12	0.52	31/08	6.4	2.88	0.56

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
043007 Stour at Throop C.A: 1073.0 km^2	**73-95**	**863**		**395**		**13.43**	**280.0**	**28/12 1979**	**1.12**	**13/08 1976**	**30.3**	**7.88**	**2.52**
M.A: EA Local No: 433710 Sens.: 4.2 S/full: 128.0m^3s^{-1}													
F.A.R: PGE Level: 4m UE: .02 FAI: 0.990													
Comment: Compound Crump profile weir, centre crest 5m broad and 2 higher flanking crests 18m broad. Site unapproachable in flood conditions and high flows are measured at Blackwater Bridge (SZ134959). Prior to 1977 high flows measured at Ensbury (3km u/s of station). Rating incorporates flow through two bypass channels just u/s of station: mill channel and Lodden Stour. Substantial ground and surface water abstractions. Some effluent returns. # Mixed geology - predominantly Chalk with some clay. Land use: rural.	1996	774	90	339	86	11.51	86.5	14/02	1.95	21/08	24.1	7.78	2.53
	1997	861	100	301	76	10.24	73.6	22/11	2.31	02/08	25.6	5.86	2.60
	1998	992	115	462	117	15.71	129.2	06/01	3.13	30/08	34.2	10.24	3.30
	1999	966	112	449	114	15.29	157.6	25/12	2.81	01/08	34.2	8.70	3.09
	2000	1197	139	685	173	23.23	171.2	31/10	3.25	14/09	51.0	14.32	3.91
044002 Piddle at Baggs Mill C.A: 183.1 km^2	**63..95**	**963**		**411**		**2.38**	**11.9**	**08/01 1968**	**0.36**	**23/08 1976**	**4.8**	**1.84**	**0.76**
M.A: EA Local No: 444510 Sens.: 7.9 S/full: 16.0m^3s^{-1}													
F.A.R: G Level: 2m UE: <.01 FAI: 0.972													
Comment: Rectangular critical depth 'humped' flume situated in left-hand bend of river. Above 8.1 m^3s^{-1} station is bypassed - estimate of flows made through arches of railway bridge. Complex water meadow system 2-3km u/s can result in minor short period fluctuations in the river flow. Major groundwater abstractions in catchment. # Upper catchment - Chalk; lower - sands, gravels and clays. Land use is predominantly agricultural.	1996	894	93	384	93	2.22	6.8	12/02	0.76	18/09	4.1	1.93	0.82
	1997	1010	105	354	86	2.05	7.9	28/11	0.82	29/07	4.3	1.58	0.95
	1998	1116	116	506	123	2.94	9.2	08/01	0.95	22/09	5.4	2.66	1.03
	1999	1051	109	441	107	2.56	8.9	20/01	0.89	15/09	5.8	1.83	0.99
	2000	1321	137	604	147	3.50	10.9	13/12	0.98	14/09	6.9	3.02	1.09
044006 Sydling Water at Sydling St Nicholas C.A: 12.4 km^2	**69..95**	**1055**		**463**		**0.18**	**1.6**	**30/05 1979**	**0.04**	**19/08 1976**	**0.4**	**0.14**	**0.06**
M.A: EA Local No: 445410 Sens.: 25.0 S/full: 1.0m^3s^{-1}													
F.A.R: N Level: 110m UE: <.01 FAI: 0.971													
Comment: Crump profile weir, crest 1.95m broad. Modular under all flow conditions. # Predominantly Lower Chalk with small outcrops of Middle and Upper Chalk forming higher ground flanking the catchment. Mainly pastoral with some arable agriculture on flatter ground.	1996	1006	95	492	106	0.19	0.7	19/11	0.07	06/10	0.4	0.16	0.08
	1997	1144	108	391	84	0.15	0.8	27/11	0.06	17/09	0.3	0.12	0.06
	1998	1275	121	598	129	0.24	1.3	05/01	0.09	20/09	0.4	0.22	0.09
	1999	1251	119	580	125	0.23	1.5	23/12	0.09	13/09	0.5	0.18	0.10
	2000	1576	149	739	160	0.29	1.7	31/12	0.09	23/09	0.5	0.25	0.10
044004 Frome at Dorchester Total C.A: 206.0 km^2	**71..95**	**1037**		**470**		**3.07**	**16.7d**	**07/02 1990**	**0.27**	**27/08 1976**	**6.1**	**2.40**	**0.83**
M.A: EA Local No: 445512 Sens.: 15.1													
F.A.R: G Level: m UE: <.01 FAI: 0.973													
Comment: Combined station: Louds Mill (local no. 445510) - two Crump profile weirs: crests 10.66m (side-spilling) and 1.52m broad. Rating includes side channel and is modular to 10 m^3s^{-1}. Complimentary Crump profile weir at Stinsford (local no. 445520), crest 3.04m wide, is modular to 4.6 m^3s^{-1}. Stinsford may drown due to weed growth d/s. Minor gw abstractions in catchment. Flows exist prior to 10/71 for Loudsmill only. # Geology: predominantly Chalk with Upper Greensand and Gault, Lias and Oolites in headwaters. Land use: rural.	1996	975	94	444	94	2.89	9.6d	09/02	0.83	18/09	5.6	2.38	0.90
	1997	1112	107	389	83	2.54	11.8d	28/11	0.89	02/08	5.4	1.92	0.94
	1998	1199	116	551	117	3.60	15.6d	05/01	1.04	23/09	6.7	3.15	1.16
	1999	1170	113	511	109	3.34	14.3d	20/01	0.97	14/09	6.7	2.51	1.20
	2000	1468	142										
044008 Sth Winterbourne at W'bourne Steepleton C.A: 19.9 km^2	**74..95**	**1080**		**158**		**0.10**	**1.6**	**01/06 1981**	**>0.00**	**14/02 1976**	**0.2**	**0.05**	**0.01**
M.A: EA Local No: 445610 Sens.: 60.0													
F.A.R: G Level: 90m UE: <.01 FAI: 1.000													
Comment: Crump V profile weir installed for low flow monitoring and year round enforcement of minimum prescribed flow conditions on PWS abstraction licence. Compensation water input 1km u/s of weir. # Chalk catchment. Rural.	1996	923	85	102	65	0.06	0.3	23/02	0.01	22/09	0.1	0.04	0.01
	1997	1097	102	82	52	0.05	0.3	30/12	0.01	31/08	0.1	0.03	0.01
	1998	1143	106	160	101	0.10	0.9	05/01	0.01	15/10	0.3	0.06	0.02
	1999	1095	101	123	78	0.08	0.4	23/01	0.01	14/09	0.2	0.05	0.02
	2000	1353	125	202	128	0.13	0.8	14/12	0.02	11/09	0.3	0.11	0.02
044001 Frome at East Stoke Total C.A: 414.4 km^2	**65..95**	**1001**		**495**		**6.50**	**25.9d**	**06/01 1994**	**0.95**	**27/08 1976**	**12.2**	**5.37**	**2.21**
M.A: EA Local No: 445912 Sens.: 5.7													
F.A.R: N Level: m UE: FAI:													
Comment: Combined station of: rectangular critical depth flume, 3.05m wide, bounded by two broad-crested weirs (local no. 445910) and complementary Crump profile weir on bypass channel, 3.565m wide (local no. 445920). Low floodbank constructed on lb to confine all flows within designed measuring range of flume - 21.5 m^3s^{-1}. Structure limit of weir 4.36 m^3s^{-1}. Flows prior to 1966 for flume only. # Geology: Mainly Chalk; Upper Greensand and Gault, Lias and Oolites in headwaters; sands, gravels and clays in lower catchment.	1996	930	93	411	83	5.39	17.5d	12/02	1.75	13/09	9.8	4.56	1.93
	1997	1064	106	372	75	4.89	19.2d	28/11	1.79	04/10	10.0	3.86	1.94
	1998	1135	113	502	101	6.59	23.2d	08/01	2.18	30/08	12.5	5.68	2.33
	1999	1100	110	457	92	6.01	23.5d	20/01	1.83	15/09	12.1	4.60	2.07
	2000	1343	134										
044009 Wey at Broadwey C.A: 7.0 km^2	**75..95**	**900**		**1397**		**0.31**	**5.5**	**30/12 1993**	**0.06**	**08/10 1989**	**0.7**	**0.22**	**0.09**
M.A: EA Local No: 446020 Sens.: 20.0 B/full: 3.3m^3s^{-1}													
F.A.R: G Level: 18m UE: <.01 FAI: 1.000													
Comment: Flat V Crump profile weir, crest 4.5m broad. Full range station. Structure capacity 3.3 m^3s^{-1}. Substantial groundwater abstraction affecting headwaters at Upwey. Some hatch activity u/s. Runoff figures suggest topographical and hydrological catchment areas do not coincide. # Predominantly a limestone catchment. Land use: mainly pastoral.	1996	807	90	1207	86	0.27	0.9	09/02	0.09	03/10	0.5	0.21	0.10
	1997	958	106	1045	75	0.23	1.6	27/11	0.08	02/11	0.5	0.16	0.08
	1998	1018	113	1656	119	0.37	1.8	05/01	0.13	19/10	0.8	0.30	0.14
	1999	946	105	1489	107	0.33	5.1	23/12	0.13	12/09	0.7	0.25	0.14
	2000	1108	123	2032	145	0.45					0.8	0.42	0.14
044003 Asker at Bridport C.A: 46.6 km^2	**66..80**	**988**		**374**		**0.58**	**30.0**	**30/05 1979**	**0.11**	**27/08 1976**	**1.1**	**0.39**	**0.20**
M.A: EA Local No: 478301 Sens.: 24.5													
F.A.R: N Level: 6m UE: .01 FAI: 0.994													
Comment: From Mar'96, Crump profile weir, 6.3m wide; above 0.618m channel is flanked by sloping shoulders to 7.3m wide, set in vertical walls. Third incarnation at various sites in Bridport. Earlier record inconsistent, incomplete and poor. Rapidly responding flow regime makes gauging difficult. # Responsive catchment due to steep slopes on Liassic clay and marl.	1996	858	87										
	1997	983	99	337	90	0.53	28.3	27/11	0.17	24/09	1.1	0.30	0.18
	1998	995	101										
	1999	1038	105	399	107	0.62	32.9	23/12	0.18	03/08	1.1	0.39	0.21
	2000	1282	130	568	152	0.88	30.2	05/11	0.24	12/09	1.8	0.52	0.25
045004 Axe at Whitford C.A: 288.5 km^2	**64..95**	**1009**		**550**		**5.03**	**244.0**	**27/12 1979**	**0.45**	**07/08 1976**	**10.7**	**2.82**	**1.18**
M.A: EA Local No: 5291052 Sens.: 8.2 S/full: 75.0m^3s^{-1}													
F.A.R: PGEI Level: 7m UE: <.01 FAI: 0.992													
Comment: Compound Crump profile weir, total width 21.3m, low flow section 7.6m broad. Cableway on site. Structure limit 2m stage. Unique rating above modular limit. Overspill at 1.95m on left bank with some bypassing, included in the rating. Moderate groundwater and surface water abstractions affect lower flows. # Catchment of moderate relief draining Chalk and Greensand headwaters. Middle and lower reaches Mercia Mudstone; Lias clays and more Greensand. Meadowland, low intensity agriculture, woodland. Minor industrial development.	1996	975	97	618	112	5.64	83.2	19/11	1.27	18/09	11.4	3.34	1.43
	1997	1130	112	663	121	6.07	136.0	27/11	1.48	19/07	14.4	2.54	1.67
	1998	1125	111	704	128	6.44	101.5	24/10	1.39	30/08	13.8	3.49	1.57
	1999	1230	122	763	139	6.98	141.9	18/09	1.41	30/07	15.4	3.39	1.58
	2000	1391	138										
045008 Otter at Fenny Bridges C.A: 104.2 km^2	**74..95**	**1045**		**625**		**2.06**	**113.8**	**20/12 1989**	**0.22**	**22/08 1976**	**4.4**	**1.11**	**0.50**
M.A: EA Local No: 5191052 Sens.: 13.7 B/full: 73.0m^3s^{-1}													
F.A.R: P Level: 55m UE: <.01 FAI: 0.996													
Comment: Velocity-area station with low level bed control and cableway, situated just u/s of road bridge. Bridge invert acts as control at high levels. Right bank likely to be over topped at 1.6m stage when bypassing likely. Minor surface water abstractions in catchment, sensibly natural flow regime. # Rises in the Greensand and Gault Clay of the Blackdown Hills. Keuper Marl in the lower reaches. Contains Honiton. Heathland, pasture and a range of agriculture.	1996	1012	97	632	101	2.08	47.9	20/03	0.50	18/09	4.3	1.27	0.55
	1997	1185	113	656	105	2.17	141.2	07/08	0.55	01/06	4.6	1.08	0.67
	1998	1162	111	714	114	2.36	42.3	01/01	0.62	30/08	4.5	1.45	0.69
	1999	1225	117	773	124	2.56	50.5	23/04	0.55	30/07	5.6	1.37	0.65
	2000	1339	128	915	146	3.02	184.3	07/12	0.64	12/08	5.9	1.55	0.68
045005 Otter at Dotton C.A: 202.5 km^2	**62..95**	*980*		**483**		**3.10**	**347.0**	**11/07 1968**	**0.44**	**27/08 1976**	**6.2**	**1.84**	**0.94**
M.A: EA Local No: 5081055 Sens.: 10.1 B/full: 88.0m^3s^{-1}													
F.A.R: PGEI Level: 15m UE: <.01 FAI: 0.998													
Comment: Velocity-area station with cableway. Station rebuilt after 1968 flood. Flat V Crump profile weir installed 1971. Full range station. Gabions stabilise bed and banks. Low embankments at field level extend containment. Substantial groundwater and surface water abstractions in catchment. # Rises in Greensand and Gault Clay of the Blackdown Hills. Predominantly Keuper sandstones and marls. Extensive alluvium and valley gravels lower down. Some heathland, woodland and pasture, and a wide range of agriculture.	1996	948	97	477	99	3.05	62.0	21/03	0.94	18/09	6.0	1.90	1.00
	1997	1106	113	473	98	3.04	108.6	07/08	0.91	01/06	6.5	1.53	1.01
	1998	1092	111	523	108	3.36	57.6	31/10	1.03	30/08	6.4	2.12	1.12
	1999	1137	116	561	116	3.60	70.0	18/09	0.95	30/07	7.7	2.05	1.06
	2000	1233	126	657	136	4.21	144.6	07/12	1.05	12/08	8.3	2.23	1.12

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
045009	**Exe at Pixton** C.A: 159.7 km^2	**66..95**	**1418**		**883**		**4.47**	**71.6**	**19/12 1982**	**0.10**	**22/08 1976**	**11.2**	**2.51**	**0.59**
M.A: EA	Local No: 1921014 Sens.: 13.3 B/full: 90.0m^3s^{-1}													
F.A.R: SRP	Level: 128m UE: <.01 FAI: 0.950													
Comment: Full range VA station. Shallow rock bar d/s of station is natural low flow control. Influence of bridge soffit u/s of station is unestablished, although rating is reliably extrapolated to bankfull. Minor abstractions in catchment, low flows significantly affected by Wimbleball Res. # Headwaters rise on Exmoor. Predominantly Devonian sandstones. Land use moorland, rough grazing, forestry.		1996	1307	92	751	85	3.79	27.3	03/11	0.71	21/08	10.7	1.90	0.77
		1997	1502	106	815	92	4.13	46.5	27/06	0.74	31/01	10.9	1.68	0.92
		1998	1853	131	1187	134	6.01	59.4	24/10	0.86	25/08	13.7	2.83	1.06
		1999	1755	124	1151	130	5.83	45.1	19/01	0.77	13/08	14.1	2.77	1.19
		2000	1981	140	1409	160	7.12	70.2	29/10	1.15	14/08	16.2	4.37	1.32
045002	**Exe at Stoodleigh** C.A: 421.7 km^2	**60..95**	*1379*		**928**		**12.41**	**232.2**	**19/12 1965**	**0.42**	**25/08 1976**	**29.0**	**7.68**	**1.59**
M.A: EA	Local No: 1911008 Sens.: 6.0 B/full: 150.0m^3s^{-1}													
F.A.R: SRPE	Level: 75m UE: <.01 FAI: 0.980													
Comment: Velocity-area station with cableway sited on a straight, stable length of river. Low flow controlled by a stone ledge 50m d/s of the gauge. Full range, calibrated to above bankfull. Liable to backing up at bridge immediately u/s in highest floods. Flood relief culvert under road on rb. Bypassing included in rating. Significantly affected by Wimbleball Res. regulation at low flows. # Headwaters drain Exmoor. Devonian s'sts and Culm Measures. Relatively impermeable catchment; moorland headwaters, grazing and forestry.		1996	1250	91	788	85	10.51	98.9	29/11	1.60	05/08	25.9	6.94	1.78
		1997	1442	105	845	91	11.29	109.4	12/02	2.45	02/05	28.4	5.52	2.81
		1998	1800	131	1249	135	16.71	178.3	24/10	2.97	03/09	33.6	9.92	3.53
		1999	1698	123	1133	122	15.15	165.1	18/12	2.14	01/08	34.5	8.42	2.82
		2000	1903	138	1322	142	17.63	190.8	29/10	2.40	12/08	39.4	11.99	3.26
045001	**Exe at Thorverton** C.A: 600.9 km^2	**56..95**	**1280**		**834**		**15.89**	**492.6**	**04/12 1960**	**0.44**	**27/08 1976**	**38.2**	**9.24**	**1.90**
M.A: EA	Local No: 1901011 Sens.: 11.8 B/full: 185.0m^3s^{-1}													
F.A.R: SRPGEI	Level: 26m UE: <.01 FAI: 0.985													
Comment: Velocity-area station with cableway. Flat V Crump profile weir constructed in 1973 due to unstable bed condition. Minor culvert flow through mill u/s of station included in rating. Low flows are affected significantly by Wimbleball Reservoir and by exports to the Taw catchment. Station is control point for operational releases from Wimbleball. # Headwaters drain Exmoor. Geology predominantly Devonian sandstones and Carboniferous Culm Measures, with subordinate Permian sandstones in the east. Moorland, forestry and a range of agriculture.		1996	1146	90	682	82	12.96	139.8	29/11	1.48	18/08	34.5	8.12	1.64
		1997	1320	103	753	90	14.35	141.0	28/11	2.58	03/05	39.1	6.22	2.90
		1998	1607	126	1128	135	21.49	250.9	24/10	3.00	31/08	44.5	11.64	3.88
		1999	1563	122	1086	130	20.70	245.3	19/01	2.15	02/08	46.6	10.89	3.21
		2000	1707	133	1254	150	23.83	306.2	30/10	2.42	12/08	56.1	14.92	3.47
045003	**Culm at Wood Mill** C.A: 226.1 km^2	**62..95**	*970*		**514**		**3.68**	**202.2**	**11/07 1968**	**0.46**	**27/08 1976**	**7.8**	**2.23**	**1.00**
M.A: EA	Local No: 2001008 Sens.: 13.7 B/full: 42.0m^3s^{-1}													
F.A.R: PGEI	Level: 44m UE: <.01 FAI: 0.996													
Comment: Velocity-area station with cableway. Flat V weir built in 1972. Channel control when structure drowned. Full range. Aug 1965 river regraded and d/s obstructions removed. Widespread u/s inundation during floods; by-pass flows included in the rating. Data unreliable prior to 1/10/62. Moderate surface and groundwater abstractions affect low flows. # Rises in the Blackdown Hills. Headwaters drain Greensand and Gault Clay. Predominantly Permo-Triassic sandstones, breccias and marls. Extensive valley gravels and alluvium. Subdued relief. Agricultural catchment.		1996	919	95	459	89	3.28	43.1	19/11	1.01	18/09	6.3	2.25	1.08
		1997	1067	110	471	92	3.38	53.1	06/08	1.11	01/06	6.7	1.83	1.26
		1998	1112	115	583	113	4.18	65.6	24/10	1.41	12/08	8.1	2.73	1.47
		1999	1172	121	661	129	4.74	81.8	18/12	1.31	30/07	9.6	2.85	1.54
		2000	1226	126	741	144	5.30	185.4	07/12	1.48	06/08	10.9	3.17	1.53
045012	**Creedy at Cowley** C.A: 261.6 km^2	**64..95**	**920**		**455**		**3.77**	**124.6**	**20/12 1993**	**0.08**	**17/08 1976**	**9.1**	**1.65**	**0.31**
M.A: EA	Local No: 4991052 Sens.: 10.8 B/full: 110.0m^3s^{-1}													
F.A.R: GE	Level: 14m UE: <.01 FAI: 0.995													
Comment: Velocity-area station in deep cutting. Rock bars form low flow control. Flood flows contained by rock walls and gabions on rb and by railway tracks on lb. C/m by wading or from a high bridge 30m u/s. # A vee-shaped catchment draining moderate to high relief valleys from the N and W. Predominantly Culm Measures s'sts and shales with some Permo-Trias breccias and s'sts near Crediton. Low grade agriculture, grazing and forestry.		1996	806	88	344	76	2.85	54.6	08/01	0.23	06/09	6.5	1.59	0.27
		1997	857	93	278	61	2.30	16.9d	18/11	0.30	31/07	6.6	1.08	0.41
		1998	1048	114	487	107	4.04	85.1	01/10	0.39	31/08	8.9	2.00	0.46
		1999	1056	115	502	110	4.16	**186.7**	**18/12**	0.41	27/07	9.2	2.16	0.56
		2000	1150	125	604	133	5.00	**196.0**	**07/12**	0.41	13/09	11.0	2.56	0.48
046002	**Teign at Preston** C.A: 381.0 km^2	**56..95**	*1274*		**770**		**9.31**	**312.8**	**30/09 1960**	**0.34**	**28/08 1976**	**22.4**	**5.07**	**1.13**
M.A: EA	Local No: 4871051 Sens.: 9.3 B/full: 86.0m^3s^{-1}													
F.A.R: SRPE	Level: 4m UE: <.01 FAI: 0.984													
Comment: Velocity-area station, channel width approx. 15m. Cableway and steel footbridge. Bypassing on rb occurs above 2.4m; some accommodation for this in rating. Low flow control is a d/s gravel shoal. 4 reservoirs and various WRW have minor affect on low flow regime. # Bulk of the river system rises on Dartmoor Granite moorland; it traverses a complex of Devonian and Carboniferous shales, s'sts and cherts before its wide alluvial valley crosses Tertiary sands and clays. Low grade agriculture and woodland.		1996	1173	92	702	91	8.45	116.9	08/01	0.76	18/09	18.7	6.12	0.99
		1997	1220	96	609	79	7.36	97.2	18/11	1.30	01/08	19.9	3.70	1.45
		1998	1506	118	938	122	11.34	122.8	03/01	1.30	01/09	25.7	6.69	1.61
		1999	1483	116	887	115	10.71	139.3	18/12	1.01	02/08	26.0	6.34	1.21
		2000	1645	129										
046005	**East Dart at Bellever** C.A: 21.5 km^2	**64..95**	**2085**		**1801**		**1.23**	**67.1**	**27/12 1979**	**0.10**	**07/09 1976**	**2.7**	**0.68**	**0.18**
M.A: EA	Local No: 4671051 Sens.: 10.0 B/full: 50.0m^3s^{-1}													
F.A.R: N	Level: 309m UE: <.01 FAI: 1.000													
Comment: Velocity-area station, channel width approximately 11.5m; cableway approximately 24m. A natural rock step provides the control, with a containment berm on the lb. Not bypassed, well rated. Natural catchment. # Steep, very wet upland catchment, draining peat covered Dartmoor Granite moorland. Responsive catchment. Flood warning station.		1996	1917	92	1626	90	1.11	42.5	03/11	0.16	18/09	2.7	0.67	0.19
		1997	2038	98	1611	89	1.10	18.6	24/12	0.24	24/04	2.4	0.57	0.27
		1998	2730	131	2318	129	1.58	39.8	31/10	0.30	03/09	3.3	0.93	0.35
		1999	2327	112	2206	122	1.50	46.4	18/12	0.20	03/08	3.3	0.87	0.23
		2000	2494	120	2475	137	1.68	54.5	31/12	0.24	30/08	3.5	1.03	0.28
046007	**West Dart at Dunnabridge** C.A: 47.9 km^2	**72..95**	**2086**		**1664**		**2.53**	**131.8**	**27/12 1979**	**0.14**	**23/08 1976**	**5.6**	**1.36**	**0.31**
M.A: EA	Local No: 4671052 Sens.: B/full: 69.0m^3s^{-1}													
F.A.R: P	Level: 284m UE: <.01 FAI: 1.000													
Comment: Informal Flat V low flow control 13.5m wide between stone batter wing walls. Cableway span 30m. In straight reach between two right hand bends. Possibility of out-of-bank flow on rb. Upper 40% of catchment affected by interception from Devonport and Prison leats (feed Burrator Res.); take varies with time. Responsive catchment. Closed between 1981 and 1991. # Upland catchment of subdued relief, high on Dartmoor granite plateau. Low grade agriculture, peat moorland.		1996	1963	94	1516	91	2.30	92.2	03/11	0.32	16/09	5.7	1.27	0.37
		1997	2049	98	1584	95	2.41	17.2d	17/11	0.42	24/04	5.4	1.24	0.54
		1998	2661	128	2334	140	3.55	87.1	31/10	0.65	26/02	7.1	2.03	0.80
		1999	2326	112	1992	120	3.03	88.6	18/12	0.43	02/08	6.7	1.59	0.46
		2000	2502	120	2312	139	3.50	120.5	31/12	0.55	11/08	7.5	1.79	0.64
046003	**Dart at Austins Bridge** C.A: 247.6 km^2	**58..95**	**1841**		**1410**		**11.07**	**549.7**	**27/12 1979**	**0.59**	**27/08 1976**	**25.0**	**6.96**	**1.45**
M.A: EA	Local No: 4761051 Sens.: 7.8 B/full: 418.0m^3s^{-1}													
F.A.R: SR	Level: 22m UE: <.01 FAI: 0.996													
Comment: Velocity-area station, main channel approx. 30m wide. Rock step forms d/s control. Channel contains the MAF. Bypassing occurs on right bank above 4.2m. Well rated. Venford Reservoir operation and exports via the Devonport Leat affect low flows. Short period of naturalised flows available. # Upper two thirds of catchment drains moorland associated with the Dartmoor Granite; lower third is of Carboniferous shales and sandstones. The relief is steep in the headwaters and at the Granite boundary. Responsive. Low grade agriculture and woodland.		1996	1692	92	1268	90	9.93	224.3	03/11	1.23	19/09	23.9	6.26	1.49
		1997	1838	100	1299	92	10.20	120.4	17/02	2.16	01/08	24.7	5.33	2.40
		1998	2247	122	1755	124	13.78	203.7	31/10	2.21	31/08	28.8	8.61	2.90
		1999	2079	113	1636	116	12.84	328.9	18/12	1.67	03/08	29.5	7.90	1.95
		2000	2325	126										
046008	**Avon at Loddiswell** C.A: 102.3 km^2	**71..95**	**1574**		**1026**		**3.33**	**88.9**	**27/12 1979**	**0.16**	**27/08 1995**	**8.0**	**2.11**	**0.39**
M.A: EA	Local No: 4741051 Sens.: B/full: 67.0m^3s^{-1}													
F.A.R: SR	Level: 6m UE: <.01 FAI: 1.000													
Comment: Velocity-area station. Cableway span 25.5m. Natural bed control, re-rated at low flows. Can be affected by weed growth. # Drains southwards from Dartmoor Granite. Predominantly Lower ORS in lower reaches, Culm Measures between. Alluvium in valley bottom. Rural, grazing and woodland in steeply incised valley.		1996	1559	99	971	95	3.14	55.7	03/11	0.33	18/09	7.8	2.06	0.39
		1997	1633	104	963	94	3.12	21.0d	27/11	0.56	01/08	8.2	1.49	0.65
		1998	1944	124	1317	128	4.27	75.2	24/10	0.70	30/08	8.7	2.69	0.92
		1999	1800	114	1217	119	3.95	87.0	18/12	0.50	03/08	8.7	2.36	0.59
		2000	2031	129										
046006	**Erme at Ermington** C.A: 43.5 km^2	**73..95**	**1760**		**1350**		**1.86**	**93.4**	**23/06 1991**	**0.08**	**24/08 1976**	**4.4**	**1.07**	**0.23**
M.A: EA	Local No: 4651051 Sens.: 16.6 B/full: 50.0m^3s^{-1}													
F.A.R: PEI	Level: 8m UE: .02 FAI: 1.000													
Comment: Velocity-area station, with low level bed control. Well rated. Significant flow modifications by abstractions and diversions for PWS, and sewage from Ivybridge. # Narrow, linear N-S trending catchment draining S flank of Dartmoor Granite. Headwaters in plateau-like moorland; main river section in steep, deeply incised valley with short tributaries. Off granite, Devonian slates widely blanketed with river gravel and alluvium. Responsive.		1996	1689	96	1272	94	1.75	41.8	03/11	0.24	18/09	3.9	1.07	0.28
		1997	1813	103	1612	119	2.22	52.5	27/11	0.33	23/04	5.1	0.84	0.38
		1998	2145	122	1663	123	2.29	72.9	24/10	0.40	03/09	4.8	1.30	0.51
		1999	1951	111	1452	108	2.00	52.3	24/12	0.26	03/08	4.4	1.09	0.31
		2000	2246	128	1812	134	2.49	**113.6**	**31/12**	0.28	11/08	5.8	1.43	0.34

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
047007	**Yealm at Pustinch** C.A: 54.9 km^2	**63..95**	**1453**		**946**		**1.65**	**30.3**	**30/12 1993**	**0.03**	**23/08 1976**	**3.8**	**1.04**	**0.19**
M.A: EA	Local No: 4551055 Sens.: 18.9 B/full: 26.0m^3s^{-1}													
F.A.R: PI	Level: 6m UE: .01 FAI: 0.992													
Comment: Low flow rectangular flume, 4.7m throat width, side and bottom contractions, superseded a velocity-area station (formalised trapezoidal channel, variable low flow rating) in Oct 1967. Station closed 23 Aug - 31 Dec 2001 for building works. Bankfull approx. MAF level; d/s bridge truncates peaks. Moderate influence from abstractions and imports. # Headwaters drain Dartmoor Granite and metamorphosed Devonian slates. Most of catchment underlain by Devonian shales and tuffs with subordinate l'st. Land use: meadowland, arable and lower grade agriculture.		1996	1374	95	917	97	1.59	21.9	03/11	0.17	18/09	3.9	1.09	0.21
		1997	1419	98	846	89	1.47	26.2	27/11	0.19	20/08	3.8	0.73	0.28
		1998	1687	116	1163	123	2.03	26.2	24/10	0.25	30/08	4.3	1.28	0.39
		1999	1592	110	1059	112	1.84	24.9	24/12	0.18	03/08	4.4	1.14	0.21
		2000	1797	124	1344	142	2.33	26.5	31/12	0.26	13/09	5.4	1.31	0.31
047010	**Tamar at Crowford Bridge** C.A: 76.7 km^2	**72..95**	**1210**		**964**		**2.34**	**68.8**	**21/09 1980**	**0.01**	**03/08 1975**	**5.0**	**0.77**	**0.08**
M.A: EA	Local No: 4291067 Sens.: 26.2 B/full: 66.0m^3s^{-1}													
F.A.R: SRP	Level: 84m UE: <.01 FAI: 0.947													
Comment: Compound Crump profile weir, total crest length 11m. Above 1.65m piers submerge (42 m^3s^{-1}). Rating used above this extrapolated from the within pier version. Flows substantially modified by the impoundment of the Tamar Lakes. # River drains coastal hills of W Cornwall; relief is quite subdued, and rocks outcropping are shales and s'sts of Carboniferous Culm Measures. Wholly rural; moorland and low grade agriculture.		1996	1069	88	541	56	1.31	15.1	29/11	0.06	14/09	3.5	0.56	0.08
		1997	1117	92	530	55	1.29	18.1	26/11	0.09	16/06	4.0	0.38	0.12
		1998	1455	120	921	96	2.24	19.8	31/10	0.19	28/05	5.8	1.04	0.26
		1999	1393	115	825	86	2.01	22.8	18/12	0.09	03/08	5.4	0.83	0.14
		2000	1607	133	1044	108	2.53	20.3	29/10	0.15	01/08	6.6	1.33	0.20
047005	**Ottery at Werrington Park** C.A: 120.7 km^2	**63..95**	**1229**		**741**		**2.84**	**138.3**	**27/12 1979**	**>0.00**	**22/08 1995**	**7.2**	**1.28**	**0.15**
M.A: EA	Local No: 4381073 Sens.: 13.5 B/full: 79.0m^3s^{-1}													
F.A.R: GE	Level: 55m UE: <.01 FAI: 0.999													
Comment: Informal Flat V low flow control 10m wide with good straight approach. Cableway span (18m) extends over flood banks. Insensitive at low flows given wide section. Reaches bankfull on lb in larger floods and then bypassed on rb. Responsive natural catchment. Closed 1981-91. # Catchment of moderate relief draining eastwards from coastal hills. Geology: mainly Devonian shales and grits and Carboniferous Culm Measures. Wholly rural, grazing and low grade agriculture, minor forestry.		1996	1156	94	751	101	2.86	66.8	08/01	0.04	19/09	7.6	1.24	0.10
		1997	1160	94	682	92	2.61	71.0	17/11	0.25	21/08	7.3	0.93	0.30
		1998	1486	121	1041	140	3.99	91.4	31/10	0.33	03/09	10.9	1.65	0.52
		1999	1439	117	1069	144	4.09	131.8	18/12	0.14	14/09	11.2	1.73	0.19
		2000	1628	132	1313	177	5.01	118.8	29/10	0.16	12/08	13.9	2.22	0.21
047019	**Tamar at Polson Bridge** C.A: 470.3 km^2	**89-95**	**1221**		**714**		**10.65**	**209.1**	**12/06 1993**	**0.20**	**21/08 1995**	**28.0**	**4.11**	**0.49**
M.A: EA	Local No: 4381080 Sens.: 15.0 B/full: 95.0m^3s^{-1}													
F.A.R:	Level: 48m UE: FAI:													
Comment: Informal Flat V control 18m wide between high angle trapezoidal gabion wing walls with a reasonably straight approach. Cableway just d/s of Kensey trib. Comes out of lb when Kensey in flood. Stage at bankfull above range of rating table. Significant modification of flow due to Tamar Lake operations. # Moderate relief catchment with Carboniferous s'sts in headwaters and remainder Culm Measures (shales, l'sts, grits). Essentially rural, low grade agriculture, some forestry.		1996	1089	89	601	84	8.95	139.7	08/01	0.35	17/09	24.6	3.79	0.48
		1997	1095	90	546	76	8.15	137.5	18/11	0.78	01/08	24.5	2.61	0.95
		1998	1422	116	878	123	13.09	182.3	31/10	1.20	03/09	33.3	5.95	1.80
		1999	1399	115										
		2000	1577	129										
047018	**Thrushel at Hayne Bridge** C.A: 57.6 km^2	**89-95**	**1182**		**750**		**1.37**	**43.7**	**18/12 1992**	**0.00**	**05/09 1989**	**3.7**	**0.53**	**0.03**
M.A: EA	Local No: 4481012 Sens.: 80.0 B/full: 25.8m^3s^{-1}													
F.A.R:	Level: 67m UE: FAI:													
Comment: Informal Flat V control, between 7m wide, high angle, trapezoidal gabion wing walls, in less than ideal section on meandering stretch. Cableway extends over low lb. Likely to contain all flows. Natural flow regime. Responsive to rainfall. # Moderate relief catchment draining W flank of Dartmoor. Geology: Carboniferous Culm Measures and Upper Devonian Slates. Rural catchment.		1996	1071	91	588	78	1.07	29.3	29/11	0.01	18/09	3.1	0.47	0.03
		1997	1025	87	497	66	0.91	19.6	17/11	0.07	20/08	2.4	0.34	0.10
		1998	1401	119	933	124	1.70	39.1	31/10	0.15	03/09	4.0	0.88	0.20
		1999	1413	120	910	121	1.66	40.8	18/12	0.04	02/08	4.1	0.82	0.08
		2000	1661	141	1243	166	2.26	41.7	29/10	0.12	12/08	5.8	1.13	0.16
047008	**Thrushel at Tinhay** C.A: 112.7 km^2	**69..95**	**1176**		**666**		**2.38**	**124.4**	**27/12 1979**	**0.01**	**22/08 1976**	**6.1**	**1.23**	**0.10**
M.A: EA	Local No: 4381071 Sens.: 32.5 B/full: 139.9m^3s^{-1}													
F.A.R: SH	Level: 56m UE: <.01 FAI: 1.000													
Comment: Three-bay compound Crump profile weir, crests of 3.66m and 10.97m (total) length. Weir claimed modular to structure full (2.74m); floodbanks would contain flow for a further 0.96m; such flow extrapolated from weir rating. Affected after 1988 by Roadford Reservoir (storage, pumped water transfers and HEP). Previously natural catchment. # Catchment of moderate relief draining shales and s'sts of Carboniferous Culm Measures. Significant terrace gravels lower down in main valley. Rural; grazing and low grade agriculture.		1996	1059	90	448	67	1.60	34.6	08/01	0.20	17/07	4.2	0.77	0.25
		1997	1018	87	375	56	1.34	26.8	17/11	0.19	21/08	3.6	0.55	0.24
		1998	1396	119	738	111	2.64	62.5	31/10	0.34	03/09	6.4	1.37	0.43
		1999	1387	118	774	116	2.77	65.4	18/12	0.21	25/07	6.9	1.43	0.27
		2000	1614	137	962	144	3.43	80.7	29/10	0.28	01/08	8.7	1.75	0.33
047006	**Lyd at Lifton Park** C.A: 222.9 km^2	**63..95**	**1263**		**718**		**5.07**	**226.5**	**17/11 1965**	**0.14**	**27/08 1976**	**12.1**	**3.03**	**0.53**
M.A: EA	Local No: 4381072 Sens.: 11.4 B/full: 176.0m^3s^{-1}													
F.A.R: SGEI	Level: 48m UE: <.01 FAI: 0.997													
Comment: Shallow (0.38m) rectangular flume, side and bed contractions, throat 3.5m wide, flanked by broad crested weirs in channel 7.9m wide. Gentle approach bend. Cableway moved approx. 5m u/s prior to 1977. Superseded velocity-area station in 1968. Largest floods exceed bankfull and bypass station. Flows significantly affected after 1988 by Roadford Res. operation. Closed 1981-88, many other data missing. # Moderate to high relief catchment draining Carboniferous Culm Measures (shales and s'sts). Wholly rural; moorland headwaters, forestry in main valleys, rough grazing, low grade agriculture.		1996	1145	91	577	80	4.06	69.8	08/01	0.53	23/09	10.3	2.31	0.61
		1997	1098	87	494	69	3.49	56.6	31/12	0.60	19/08	9.5	1.68	0.74
		1998	1470	116	862	120	6.09	118.9	31/10	0.92	01/09	13.4	4.10	1.23
		1999	1458	115	834	116	5.89	133.6	19/01	0.52	26/07	13.3	3.53	0.71
		2000	1701	135	1047	146	7.38	172.1	29/10	0.88	01/08	17.9	4.38	1.00
047001	**Tamar at Gunnislake** C.A: 916.9 km^2	**56..95**	**1245**		**776**		**22.55**	**714.6**	**28/12 1979**	**0.58**	**23/08 1976**	**55.7**	**11.91**	**2.00**
M.A: EA	Local No: 4471051 Sens.: 7.1 B/full: 550.0m^3s^{-1}													
F.A.R: SRPEI	Level: 8m UE: <.01 FAI: 0.994													
Comment: Velocity-area station, wide, shallow channel. Cableway span 46.9m. Low flows measured at another, narrower, site. High flow gauging difficult owing to standing waves. Roadford Reservoir from 1989 may have significant affect at low flows. Informal Flat V control installed 1991. # Rural catchment of moderate relief, draining very disturbed lower Carboniferous slates, shales, grits and volcanics. Significant alluvial flats in middle reaches, Devonian slates low down. Fairly responsive. A range of agriculture, grazing and forestry as land use.		1996	1155	93	652	84	18.89	263.1	08/01	1.62	18/09	49.9	9.92	2.07
		1997	1133	91	576	74	16.76	226.8	18/11	2.61	21/08	47.5	6.97	3.31
		1998	1469	118	923	119	26.83	357.7	31/10	4.73	31/08	63.6	14.37	5.19
		1999	1444	116	907	117	26.36	522.3	18/12	2.64	16/08	67.0	13.24	3.26
		2000	1665	134	1108	143	32.14	507.3	30/10	3.28	12/08	78.5	17.66	3.93
047016	**Lumburn at Lumburn Bridge** C.A: 20.5 km^2	**76..95**	**1315**		**826**		**0.54**	**17.9**	**18/12 1992**	**0.04**	**01/09 1995**	**1.2**	**0.31**	**0.07**
M.A: EA	Local No: 4471054 Sens.: 27.0 B/full: 2.6m^3s^{-1}													
F.A.R: N	Level: 67m UE: FAI:													
Comment: Velocity-area station poorly sited on a sharp bend u/s of a road bridge. Peak flows likely to be throttled by the bridge but contained by it. C/m by wading or from the bridge. Natural catchment with very flashy regime. # Moderate relief rural catchment draining Carboniferous Culm Measures and Devonian Slate. Grazing, low grade agriculture.		1996	1308	99	815	99	0.53	3.9	08/01	0.06	11/10	1.2	0.38	0.08
		1997	1240	94	682	83	0.44	3.9	27/11	0.08	15/06	1.2	0.24	0.11
		1998	1559	119	1110	134	0.72	11.4	26/12	0.17	12/10	1.5	0.49	0.21
		1999	1490	113	1037	126	0.67	16.5	19/01	0.04	05/09	1.5	0.43	0.09
		2000	1741	132	1273	154	0.83	26.9	31/12	0.11	26/07	1.9	0.45	0.12
047014	**Walkham at Horrabridge** C.A: 44.6 km^2	**76..95**	**1689**		**1236**		**1.75**	**50.9**	**30/11 1992**	**0.13**	**07/08 1989**	**3.7**	**1.22**	**0.33**
M.A: EA	Local No: 4561057 Sens.: 35.7 B/full: 46.0m^3s^{-1}													
F.A.R: PI	Level: 82m UE: .01 FAI: 1.000													
Comment: Three-bay compound structure with 2.47m thin-plate weir, 9.48m triangular profile weir and an 8.53m broad-crested weir, theoretically rated. Limited range calibration, high flows unreliable, (HIFs only held on NRFA from Jan 1981). Moderate flow modification by PWS abstraction. # Substantially moorland catchment draining western Dartmoor Granite. Steep, afforested valley flanks as the river leaves the granite and drains Devonian slates, l'sts and volcanics.		1996	1615	96	1125	91	1.59	35.6	03/11	0.34	19/09	3.6	1.07	0.39
		1997	1684	100	1128	91	1.60	18.2	24/12	0.51	24/04	3.3	1.06	0.60
		1998	2119	125	1560	126	2.21	31.1	31/10	0.59	03/09	4.3	1.58	0.69
		1999	1902	113	1386	112	1.96	35.0	19/01	0.34	14/09	4.1	1.37	0.40
		2000	2159	128	1694	137	2.39	57.2	31/12	0.48	11/08	4.8	1.54	0.55
047015	**Tavy at Denham / Ludbrook** C.A: 197.3 km^2	**81..95**	**1623**		**1012**		**6.33**	**188.8**	**18/12 1992**	**0.49**	**07/09 1984**	**15.8**	**3.41**	**0.88**
M.A: EA	Local No: 4461003 Sens.: 12.0 B/full: 188.8m^3s^{-1}													
F.A.R:	Level: 10m UE: FAI:													
Comment: Unconventional control comprised of triangular profile low flow weir set within shallow (0.3m) wing walls which curve through 90 deg. to fill the whole channel (20m). Cableway span 32m. Low flows dominated by abstractions for HEP, PWS for Plymouth and the Morwellham canal. Responsive, well contained. # Catchment drains from W flank of Dartmoor Granite plateau; valleys are steeply incised and forested below Tavistock. Moorland, rough grazing and low grade agriculture.		1996	1524	94	939	93	5.86					15.2	3.41	1.13
		1997	1542	95	937	93	5.86	61.2	24/12	1.43	20/04	14.1	3.24	1.65
		1998	1984	122	1474	146	9.22	123.8	31/10	1.94	30/08	18.8	6.11	2.31
		1999	1780	110	1258	124	7.87	182.9	19/01	1.14	14/09	18.4	4.54	1.30
		2000	2028	125	1609	159	10.04	283.9	31/12	1.56	11/08	21.9	5.15	1.88

		Period	Rainfall (mm)	% of pre-1998	Runoff (mm)	% of pre-1998	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
047013	**Withey Brook at Bastreet** C.A: 16.2 km^2	**72..95**	**1738**		**1147**		**0.59**	**22.0**	**27/12 1979**	**0.03**	**11/08 1974**	**1.3**	**0.36**	**0.10**
M.A: EA	Local No: 4271066 Sens.: 11.0 B/full: 8.4m^3s^{-1}													
F.A.R: P	Level: 229m UE: FAI:													
Comment: Three-bay compound Crump profile weir, crest lengths 0.91m and 2.54m (total). Affected by subsidence post-1990 (unquantified). Residual flow gauge for associated major PWS abstraction. Occasional substantial diversions into the catchment from Sibleyback Res. Associated climate station. # Moorland catchment of moderate relief entirely upon the granite of Bodmin Moor; widespread peat; main valley broad and marshy.		1996	1648	95	1162	101	0.60	10.9	08/01	0.04	18/09	1.4	0.33	0.06
		1997	1553	89	1009	88	0.52	12.6	17/11	0.09	01/05	1.2	0.25	0.10
		1998	1886	109	1564	136	0.80	16.0	24/10	0.12	30/08	1.8	0.45	0.18
		1999	1805	104	1452	127	0.75	24.2	**18/12**	0.08	14/09	1.8	0.36	0.09
		2000	2123	122										
047004	**Lynher at Pillaton Mill** C.A: 135.5 km^2	**63..95**	**1451**		**1038**		**4.46**	**150.1**	**04/11 1967**	**0.25**	**27/08 1976**	**10.1**	**2.77**	**0.66**
M.A: EA	Local No: 4361069 Sens.: 13.8 B/full: 67.0m^3s^{-1}													
F.A.R: P	Level: 9m UE: <.01 FAI: 0.997													
Comment: Velocity-area station, channel approx. 10.6m wide, cableway span 16.9m. D/s shoal as control. Limited confidence to upper range rating. Imports from Sibleyback Res. exceed direct PWS abstraction, moderate net affect at low flows. # Headwaters rise on Bodmin peat covered granite moorland; thence Devonian slates and volcanics; middle reach crosses a Carboniferous shale and s'st inlier. Drift restricted to alluvium. Generally low grade land gives rise to a variety of agricutture, grazing and forestry.		1996	1427	98	1074	103	4.60	54.5	14/01	0.47	18/09	10.2	3.14	0.59
		1997	1373	95	926	89	3.98	43.3	27/11	0.94	25/08	9.4	2.31	1.11
		1998	1719	118	1346	130	5.78	55.9	26/12	1.34	30/08	11.1	4.03	1.80
		1999	1642	113	1230	118	5.28	72.5	18/12	0.78	14/09	11.6	3.28	0.90
		2000	1932	133	1529	147	6.55	71.9	30/10	1.06	11/08	13.7	3.95	1.40
047009	**Tiddy at Tideford** C.A: 37.2 km^2	**69..95**	**1288**		**772**		**0.91**	**10.2**	**27/12 1979**	**0.06**	**26/08 1976**	**2.2**	**0.56**	**0.13**
M.A: EA	Local No: 4351068 Sens.: 29.2 B/full: 48.9m^3s^{-1}													
F.A.R: N	Level: 4m UE: <.01 FAI: 1.000													
Comment: Crump profile weir 5.5m wide, wing walls 2.3m high. Subsiduary floodbanks. Thought to be fully modular. Natural catchment. # Elongated, linear catchment, headwaters rise from southernmost outcrop of Bodmin granite. Great bulk of the catchment on Devonian shales and slates interspersed with tuffs and lavas. Moderate relief, low grade agricutture, grazing and forestry.		1996	1316	102	853	110	1.00	7.2	14/01	0.15	18/09	2.3	0.68	0.18
		1997	1279	99	709	92	0.84	7.1	27/11	0.19	31/07	2.2	0.45	0.22
		1998	1661	129	1036	134	1.22	7.8	26/12	0.26	30/08	2.5	0.82	0.35
		1999	1535	119	933	121	1.10	**10.5**	**19/01**	0.17	28/07	2.5	0.65	0.20
		2000	1767	137	1153	149	1.36	**10.6**	**31/12**	0.25	11/09	2.9	0.73	0.28
048010	**Seaton at Trebrownbridge** C.A: 39.1 km^2	**57..95**	*1356*		**819**		**1.02**	**14.1**	**27/12 1979**	**0.12**	**22/09 1995**	**2.3**	**0.70**	**0.21**
M.A: EA	Local No: 4251064 Sens.: 13.6 B/full: 65.9m^3s^{-1}													
F.A.R: GIN	Level: 27m UE: .02 FAI: 0.989													
Comment: Three-bay compound Crump profile weir, crest lengths 3m and two of 4m. Wing walls and floodbanks at 2.05m. Thought to be fully modular. U/s subject to siltation. Minimal interference with natural flow regime. # Elongated, linear catchment springing from southernmost outcrop of Bodmin Granite. Great bulk of the catchment on Devonian slates and shales interspersed with tuffs and lavas. Moderate relief, low grade agriculture, grazing and forestry.		1996	1375	101	786	96	0.97	6.0	14/01	0.18	16/09	2.1	0.75	0.21
		1997	1333	98	698	85	0.87	8.4	27/11	0.24	31/07	2.1	0.55	0.26
		1998	1735	128	1005	123	1.25	7.7	26/12	0.38	03/09	2.3	0.97	0.47
		1999	1582	117	885	108	1.10	**15.1**	**19/01**	0.23	22/08	2.1	0.77	0.25
		2000	1831	135	1130	138	1.40	14.4	31/12	0.31	11/08	2.8	0.97	0.37
048001	**Fowey at Trekelvesteps** C.A: 36.8 km^2	**57..95**	**1687**		**1167**		**1.36**	**38.8**	**27/12 1979**	**0.10**	**05/10 1959**	**2.9**	**0.98**	**0.25**
M.A: EA	Local No: 4261065 Sens.: 8.0 B/full: 49.4m^3s^{-1}													
F.A.R: SRP	Level: 188m UE: <.01 FAI: 0.938													
Comment: Three-bay compound Crump profile weir, crest lengths 1.52m and 5.49m (total) superseded a broad-crested weir with central notch (limited accuracy, flow overestimated) on 4/10/68. Flood embankments ensure the full range is gauged. Substantial flow modification from associated PWS abstraction, Sibleyback Res. operation and exports. # Moderate relief, wet moorland catchment on the Bodmin Moor Granite. Extensive hill and valley peat deposits. Kaolinised granite moderates direct runoff response.		1996	1615	96	1146	98	1.33	12.7	08/01	0.35	11/07	2.7	0.89	0.41
		1997	1513	90	999	86	1.17	15.6	17/11	0.46	15/05	2.5	0.70	0.49
		1998	1870	111	1520	130	1.77	18.6	31/10	0.55	13/08	3.4	1.22	0.67
		1999	1765	105	1358	116	1.58	**43.2**	**18/12**	0.38	14/09	3.5	0.92	0.42
		2000	2106	125	1773	152	2.06	31.2	31/12	0.34	13/09	4.3	1.30	0.40
048009	**St Neot at Craigshill Wood** C.A: 22.7 km^2	**71..95**	**1558**		**1085**		**0.78**	**21.1**	**27/12 1979**	**0.06**	**26/08 1976**	**1.5**	**0.63**	**0.17**
M.A: EA	Local No: 4161062 Sens.: 12.1 S/full: 32.0m^3s^{-1}													
F.A.R: SRPE	Level: 71m UE: <.01 FAI: 0.635													
Comment: Three-bay compound Crump profile weir, crest lengths 1.75m and 5.5m (total). Wing walls at 1.7m. Flood banks contain flows up to wingwall height, fully modular. Natural flow regime until 1983, when Colliford reservoir began to fill. Since, river regulation and PWS exports. # 70% of upper catchment on granite intrusion of Bodmin Moor. Hill tops are rounded with some peat, valleys can be steep. Lower 30% underlain by metamorphosed Devonian slates. Entirely rural before reservoir built; some abandoned china clay pits. Baseflow high from storage in kaolinised granite.		1996	1496	96	866	80	0.62	3.2	14/01	0.24	14/05	0.9	0.56	0.28
		1997	1378	88	708	65	0.51	2.6	28/11	0.20	22/06	0.8	0.45	0.23
		1998	1719	110	815	75	0.59	3.6	26/12	0.25	04/06	1.0	0.47	0.28
		1999	1636	105	984	91	0.71	7.0	18/12	0.19	17/09	1.3	0.54	0.29
		2000	1944	125	1311	121	0.94	7.7	07/12	0.25	06/07	2.2	0.66	0.28
048004	**Warleggan at Trengoffe** C.A: 25.3 km^2	**69..95**	**1479**		**1027**		**0.82**	**15.4**	**28/11 1973**	**0.10**	**27/08 1976**	**1.7**	**0.63**	**0.19**
M.A: EA	Local No: 4161060 Sens.: 10.0 B/full: 40.8m^3s^{-1}													
F.A.R: N	Level: 70m UE: <.01 FAI: 0.973													
Comment: Three-bay compound Crump profile weir, crest lengths 1.52m and 8.53m (total). Wing walls at 1.67m. Flood banks contain flows up to wing wall height. The only gauged natural catchment on Bodmin Moor. # The upper 70% drains the kaolinised granite. The relief is moderate to steep. The lower 30% traverses metamorphosed Devonian slates. Baseflow high for an upland catchment owing to storage in the granite.		1996	1464	99	1046	102	0.84	8.0	14/01	0.16	14/09	1.8	0.60	0.18
		1997	1323	89	831	81	0.67	9.4	17/11	0.23	20/08	1.4	0.41	0.25
		1998	1663	112	1324	129	1.06	8.2	24/10	0.32	30/08	2.1	0.75	0.38
		1999	1607	109	1205	117	0.97	**22.4**	**18/12**	0.22	14/09	2.0	0.60	0.25
		2000	1896	128	1695	165	1.36	16.5	31/12	0.30	13/09	2.9	0.91	0.34
048011	**Fowey at Restormel** C.A: 169.1 km^2	**61..95**	*1506*		**913**		**4.89**	**223.7**	**03/11 1967**	**0.26**	**28/08 1976**	**10.9**	**3.27**	**0.77**
M.A: EA	Local No: 4061059 Sens.: 7.8 B/full: 145.8m^3s^{-1}													
F.A.R: SRP	Level: 9m UE: <.01 FAI: 0.920													
Comment: Compound Crump profile weir, crest lengths 3.5m and 13m (total). Piers at 1.75m, wing walls at 2.5m. Flood banks contain flows up to wing wall height. U/s cableway, fish counter. Substantial modifications to flow from associated PWS abstraction, Colliford and Sibleyback reservoirs and other PWS exports. # Moderate relief catchment whose headwaters drain the kaolinised granite of Bodmin Moor. Middle and low reaches drain Devonian slates and grits. Some valley storage in gravels. Low grade agriculture, grazing and forestry.		1996	1462	97	827	91	4.42	55.9	14/01	0.53	13/09	10.4	2.59	0.91
		1997	1349	90	654	72	3.51	34.1	27/11	0.80	14/08	8.4	1.84	1.07
		1998	1687	112	1025	112	5.50	43.0	26/12	1.20	27/08	11.9	3.51	1.55
		1999	1614	107	957	105	5.13	108.1	18/12	1.02	17/09	12.2	2.93	1.20
		2000	1901	126	1291	141	6.90	84.9	07/12	1.18	27/08	16.0	3.71	1.39
048003	**Fal at Tregony** C.A: 87.0 km^2	**78..95**	**1263**		**737**		**2.03**	**48.2d**	**27/12 1979**	**0.21**	**08/09 1984**	**4.4**	**1.38**	**0.43**
M.A: EA	Local No: 3941056 Sens.: 6.7 B/full: 13.0m^3s^{-1}													
F.A.R: EI	Level: 7m UE: .02 FAI: 0.988													
Comment: Originally a velocity-area station in a formalised trapezoidal channel; augmented by a low flow, side-contracted flume 2.8m wide in Aug 1967. Data available from June 1978, earlier data unreliable due to silting of inlet pipes. Site not ideal for high flows (bankfull stage is above range of rating table), HIFS on NRFA from Jan 1981. Moderate modification to flows owing to industrial abstractions and returns. # Moderate to low relief catchment draining Devonian slates, shales and grits. Upper reaches plateau-like alluvial flats. Traverses the kaolinised St Austell Granite. Low grade agriculture and grazing.		1996	1273	101	783	106	2.15	15.6	14/01	0.39	08/09	5.6	1.25	0.47
		1997	1285	102	680	92	1.87	38.6	26/11	0.48	31/05	4.1	1.16	0.59
		1998	1552	123	985	134	2.72	15.2	19/12	0.69	27/08	5.7	1.72	0.90
		1999	1394	110	828	112	2.29	41.6	18/12	0.48	03/08	4.7	1.36	0.62
		2000	1613	128	1085	147	2.98	**52.0**	**07/12**	0.54	10/08	6.4	1.80	0.72
048005	**Kenwyn at Truro** C.A: 19.1 km^2	**68..95**	**1127**		**639**		**0.39**	**30.4**	**11/10 1988**	**0.02**	**20/08 1976**	**0.9**	**0.22**	**0.05**
M.A: EA	Local No: 3841054 Sens.: 20.0 B/full: 23.9m^3s^{-1}													
F.A.R: N	Level: 7m UE: .03 FAI: 0.988													
Comment: Three-bay compound Crump profile weir, crest lengths 1.22m and 3.05m (total). Pier and wing wall height 1.98m. Contains all flows; potential for non-modularity at the highest flows. Variable shoaling affects low flow precision. Suspect data 28 Jul - 23 Aug 2001 resulting from backing up from a temporary informal weir immediately ds of crump. Substantially natural catchment but flood retention ponds (from January 1991) alter high flow response. High baseflow for the relief. # Catchment of moderate relief, with wooded, incised valleys. Geology: Devonian grits and shales.		1996	1094	97	634	99	0.38	5.2	11/01	0.04	18/09	0.9	0.25	0.06
		1997	1137	101	556	87	0.34	3.8	05/06	0.06	31/07	0.9	0.20	0.08
		1998	1311	116	777	122	0.47	7.7	19/12	0.09	22/09	1.0	0.31	0.11
		1999	1218	108	637	100	0.39	8.7	18/12	0.07	14/09	0.9	0.20	0.08
		2000	1350	120	761	119	0.46	11.0	07/12	0.05	13/09	1.0	0.31	0.07
048007	**Kennal at Ponsanooth** C.A: 26.5 km^2	**68..95**	**1334**		**600**		**0.50**	**6.3**	**27/12 1979**	**0.03**	**10/08 1990**	**1.2**	**0.32**	**0.07**
M.A: EA	Local No: 3731053 Sens.: 38.7 B/full: 42.1m^3s^{-1}													
F.A.R: SRPGI	Level: 14m UE: .01 FAI: 0.867													
Comment: Crump profile weir 4.88m crest length, height of wing walls and floodbanks: 2.05m. Modular at all recorded stages. Substantial modification to flows owing to exports from Stithians Res. Some industrial usage produces unpredictable hydrographs. # Moderate to steep catchment draining the Carnmenellis Granite, with small area of metamorphosed shales and grits. Granite well weathered, giving high baseflow. Responsive to heavy rainfall.		1996	1235	93	521	87	0.44	3.5	12/02	0.06	25/07	1.1	0.30	0.08
		1997	1432	107	568	95	0.48	2.9	03/08	0.08	30/05	1.1	0.34	0.11
		1998	1528	115	821	137	0.69	4.9	26/12	0.15	22/09	1.5	0.44	0.18
		1999	1405	105	722	120	0.61	**6.5**	**18/12**	0.14	01/08	1.6	0.33	0.15
		2000	1633	122	837	140	0.70	**7.6**	**07/12**	0.12	12/09	1.5	0.44	0.13

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
049002 Hayle at St Erth C.A: 47.6 km^2	**57..95**	**1117**		**667**		**1.01**	**9.2**	**31/01 1988**	**0.14**	**29/08 1976**	**2.2**	**0.69**	**0.22**
M.A: EA Local No: 3531051 Sens.: 7.3 B/full: 21.3m^3s^{-1}													
F.A.R: GI Level: 7m UE: .01 FAI: 0.970													
Comment: Compound Crump profile weir, crest lengths: 1.22m and 3.35m (total). Piers and wing walls at 1.83m; floodbanks at 3.6m. Superseded an unsatisfactory velocity-area station seriously affected by weed growth. Mine drainage may affect the flows moderately. Slow responding catchment; much storage. # Headwaters drain two moorland granite outcrops; majority of the catchment is underlain by grits and shales of Devonian age, crossed by dyke swarms. Mining spoil in the floodplain. Generally low grade agricultural use.	1996	1009	90	602	90	0.91	5.0	19/01	0.20	18/09	2.0	0.73	0.22
	1997	1163	104	647	97	0.98	3.4	27/11	0.26	31/07	2.0	0.76	0.31
	1998	1306	117	865	130	1.31	5.9	05/01	0.35	22/09	2.7	0.98	0.38
	1999	1132	101	667	100	1.01	5.5	19/01	0.25	14/09	2.6	0.61	0.30
	2000	1269	114	838	126	1.26	6.5	07/12	0.24	13/09	2.8	0.93	0.27
049004 Gannel at Gwills C.A: 41.0 km^2	**69..95**	**1065**		**536**		**0.70**	**26.7**	**11/10 1988**	**0.05**	**19/09 1984**	**1.6**	**0.44**	**0.10**
M.A: EA Local No: 3851055 Sens.: 37.0 B/full: 40.0m^3s^{-1}													
F.A.R: GEI Level: 9m UE: .01 FAI: 1.000													
Comment: Crump profile weir, crest length 6m, wing walls 1.9m, modular throughout its range. Flood banks contain flow up to 2.78m; they may be treated as weirs for higher stages. Insensitive at low flows. Valley inundates u/s of the road bridge. Natural catchment, but mine drainage may affect low flows. # Moderately steep catchment draining calcareous slates and thin l'sts of the lower Devonian. Low grade agriculture, pasture. Subdued response.	1996	1091	102	573	107	0.74	12.7	07/02	0.09	08/09	1.9	0.46	0.11
	1997	1062	100	432	81	0.56	6.9	26/11	0.12	31/07	1.3	0.33	0.15
	1998	1253	118	667	124	0.87	16.8	19/12	0.20	30/08	1.9	0.58	0.22
	1999	1101	103	558	104	0.73	18.8	18/12	0.12	21/08	1.6	0.42	0.15
	2000	1292	121	729	136	0.94	**27.4**	**07/12**	0.12	13/09	2.1	0.62	0.14
049003 De Lank at De Lank C.A: 21.5 km^2	**67..95**	**1682**		**1113**		**0.76**	**26.5**	**27/09 1974**	**0.01**	**06/07 1975**	**1.6**	**0.50**	**0.08**
M.A: EA Local No: 4171063 Sens.: 15.7 B/full: 32.0m^3s^{-1}													
F.A.R: P Level: 226m UE: <.01 FAI: 0.995													
Comment: Three-bay compound Crump profile weir, crest lengths 1.22m and 6.4m (total). Divide piers at 1.01m, wing walls 1.62m. Unusually small difference between crest elevations (0.095m). Very seldom drowned or outflanked, however, siltation problems in summer months. Flows substantially modified by associated PWS works. # Moderate relief, wet catchment on the Bodmin Moor Granite. The river occupies marshy alluvial flats in the headwaters. Responsive.	1996	1632	97	1084	97	0.74	8.8	08/01	0.06	04/08	1.8	0.47	0.11
	1997	1506	90	909	82	0.62	6.9	18/11	0.13	20/08	1.4	0.37	0.16
	1998	1871	111	1366	123	0.93	12.7	31/10	0.22	03/09	1.9	0.68	0.29
	1999	1746	104										
	2000	2138	127	1618	145	1.10	17.7	29/10	0.15	11/08	2.4	0.73	0.18
049001 Camel at Denby C.A: 208.8 km^2	**64..95**	**1405**		**900**		**5.96**	**306.4**	**12/06 1993**	**0.36**	**28/08 1976**	**13.4**	**4.00**	**0.85**
M.A: EA Local No: 4061058 Sens.: 10.5 B/full: 43.0m^3s^{-1}													
F.A.R: SRPE Level: 5m UE: .01 FAI: 0.993													
Comment: Velocity-area station with a low flow control. Replaced an unreliable station at Grogley, 1km d/s. Rating shifts regularly, but is generally sound. Floods contained at the site but station bypassed. Flows significantly modified by PWS and sewage from Bodmin. # The upper catchment drains Devonian slates (variously affected by the granite) and the Bodmin Moor Granite. Lower catchment drains Devonian slates and grits. Moorland and low grade agriculture and grazing.	1996	1378	98	964	107	6.36	77.0	14/01	0.74	18/09	15.8	4.00	0.88
	1997	1280	91	753	84	4.99	78.2	17/11	1.30	11/08	10.7	2.93	1.47
	1998	1600	114	1126	125	7.45	78.3	31/10	1.78	30/08	15.1	4.90	2.18
	1999	1494	106	1012	112	6.70	278.8	18/12	0.99	14/09	14.9	3.93	1.08
	2000	1805	128	1450	161	9.57	129.9	07/12	1.42	13/09	22.1	5.69	2.00
050005 West Okement at Vellake C.A: 13.3 km^2	**75..95**	**2097**		**1619**		**0.68**	**35.5**	**12/09 1993**	**>0.00**	**08/07 1981**	**1.6**	**0.33**	**0.08**
M.A: EA Local No: 4591005 Sens.: 12.0 B/full: 9.5m^3s^{-1}													
F.A.R: P Level: 286m UE: <.01 FAI: 0.983													
Comment: Rectangular thin plate weir flanked by compound broad-crested weirs with a bridge over. Lack of suitable metering sites renders rating difficult - some has been attempted at a bridge d/s. Out of bank above 1.1m and big floods will bypass. Low flows dominated by Prewley WTW abstraction u/s. Only chart recorder at this site. # Drains northwards from the highest area of Dartmoor. Wholly on granite. Channel is wide, meandering and rocky. Moorland.	1996	1851	88	1451	90	0.61	21.0	03/11	0.08	05/08	1.7	0.27	0.09
	1997	1962	94	1416	87	0.60	11.6	24/02	0.10	06/04	1.5	0.24	0.11
	1998	2645	126	2090	129	0.88	21.1	31/10	0.10	23/05	1.9	0.44	0.11
	1999	2055	98										
	2000	2353	112	2176	134	0.92	**36.5**	**31/12**	0.09	11/08	2.3	0.45	0.10
050011 Okement at Jacobstowe C.A: 82.1 km^2	**73..95**	**1509**		**985**		**2.57**	**170.0**	**27/12 1979**	**0.09**	**23/08 1976**	**6.1**	**1.42**	**0.32**
M.A: EA Local No: Sens.:													
F.A.R: Level: m UE: FAI:													
Comment: Low level bed control constructed in 1991 (station reopened on 11/9/91), previously natural bed control 2/11/73- 6/10/81 (station closed due to national cut-backs). Flows partially controlled by the influence of a reservoir/dam u/s (constructed in the early 1970s).	1996	1347	89	839	85	2.18	59.6	03/11	0.27	05/08	5.6	1.26	0.31
	1997	1357	90	743	75	1.94	16.5	12/02	0.40	02/05	4.8	0.93	0.47
	1998	1864	124	1205	122	3.14	29.9	31/10	0.58	01/09	7.4	2.03	0.66
	1999	1624	108	1051	107	2.74	37.8	19/01	0.33	07/08	7.1	1.47	0.36
	2000	1863	123	1457	148	3.78	72.8	29/10	0.43	12/08	8.4	2.16	0.52
050009 Lew at Norley Bridge C.A: 20.2 km^2	**88..95**	**1273**		**793**		**0.51**	**22.7**	**07/12 1994**	**>0.00**	**01/09 1995**	**1.3**	**0.20**	**0.02**
M.A: EA Local No: Sens.: B/full: 18.0m^3s^{-1}													
F.A.R: N Level: 103m UE: FAI:													
Comment: Informal Flat V low flow control, 6.7m wide between high angle, trapezoidal gabion wing walls. Gauging is by wading at low flows, off the u/s bridge at high flows. Responsive natural catchment but installed to monitor potential transfer from Roadford Res. # Catchment of moderate relief draining Carboniferous Culm Measures (shale, l'st, s'st). Wholly rural, rough grazing, low grade agriculture and a little forestry.	1996	1105	87	634	80	0.41	16.1	03/11	>0.00	18/09	1.1	0.19	0.01
	1997	1100	86	559	70	0.36	9.5	17/02	0.03	18/08	0.9	0.12	0.04
	1998	1524	120	*1055*	133	0.68					1.6	0.31	0.07
	1999	1470	115	1008	127	0.65	**24.7**	**18/12**	0.02	01/08	1.5	0.27	0.03
	2000	1704	134	1182	149	0.76	21.5	29/10	0.04	12/08	1.9	0.39	0.05
050008 Lew at Gribbleford Bridge C.A: 71.1 km^2	**88..95**	**1258**		**704**		**1.59**	**82.2**	**01/01 1991**	**0.00**	**01/09 1995**	**4.3**	**0.56**	**0.03**
M.A: EA Local No: Sens.: B/full: 50.0m^3s^{-1}													
F.A.R: N Level: 81m UE: FAI:													
Comment: Informal Flat V control 10.4m wide between high angle, trapezoidal gabion wing walls. On gentle bend with reasonably straight approach. Cableway. Large floods inundate lb, larger will bypass station. No backwater effects. Natural catchment but installed to monitor potential transfer from Roadford Res. # Catchment of moderate relief draining Carboniferous Culm Measures (shales, l'sts, s'sts). Wholly rural, moorland and rough grazing, minor forestry.	1996	1082	86	520	74	1.17	42.4	03/11	0.00	19/09	3.3	0.47	
	1997	1076	86	448	64	1.01	24.3	17/02	0.05	31/07	2.9	0.29	0.07
	1998	1479	118	882	125	1.99	**87.2**	**31/10**	0.11	31/08	4.9	0.86	0.16
	1999	1412	112	859	122	1.94	**110.4**	**18/12**	0.02	02/08	4.8	0.68	0.04
	2000	1650	131	1005	143	2.26	98.5	29/10	0.06	12/08	5.5	1.09	0.09
050010 Torridge at Rockhay Bridge C.A: 257.8 km^2	**88..95**	**1313**		**871**		**7.12**	**116.7**	**30/10 1994**	**0.09**	**21/08 1995**	**19.3**	**2.83**	**0.30**
M.A: EA Local No: 1501060 Sens.: 11.9 B/full: 74.5m^3s^{-1}													
F.A.R: N Level: 61m UE: FAI:													
Comment: Informal Flat V low flow control between high angle, trapezoidal gabion wing walls. Sited on a bend. Gauging from an u/s iron footbridge. Large flows inundate wide flood plain u/s of the bridge but the site contains most flows. Substantially natural catchment but installed to monitor potential transfer from Roadford Res. # Moderate relief catchment, wholly rural, draining Carboniferous Culm Measures (shales and s'sts). Close to N Devon Coast. Land use is mostly grazing and low grade agriculture and minor forestry.	1996	1111	85	680	78	5.55	87.4	29/11	0.12	20/09	15.1	2.46	0.22
	1997	1191	91	698	80	5.70	103.4	28/11	0.38	18/06	15.8	1.70	0.57
	1998	1571	120	1176	135	9.61	**121.0**	**31/10**	0.87	27/05	24.8	4.51	1.16
	1999	1488	113	1099	126	8.98	**124.7**	**18/12**	0.38	02/08	23.3	3.69	0.60
	2000	1709	130	1378	158	11.24	119.8	29/10	0.68	26/07	27.8	5.76	0.89
050002 Torridge at Torrington C.A: 663.0 km^2	**60..95**	*1183*		**751**		**15.78**	**730.0**	**28/12 1979**	**0.12**	**25/08 1976**	**40.1**	**7.32**	**0.86**
M.A: EA Local No: 1511004 Sens.: 9.6 B/full: 187.0m^3s^{-1}													
F.A.R: SRPEI Level: 14m UE: <.01 FAI: 0.998													
Comment: Velocity-area station, main channel 28m wide, cableway span 32.5m. Overspilling begins on left bank at about 3.3m. Reconstructed in 1977. Well calibrated throughout range. Records prior to Oct 1962 unreliable. Moderate modification to flows from Meldon Reservoir. # Large rural catchment draining coastal hills in west and Dartmoor Granite in south. Geology mostly Carboniferous shales and sandstones of the Culm. Moorland, rough grazing and generally low grade agricultural land.	1996	1059	90	577	77	12.11	198.4	29/11	0.53	19/09	31.3	6.07	0.68
	1997	1122	95	580	77	12.20	172.9	17/02	1.30	01/08	33.4	4.12	1.69
	1998	1491	126	1010	134	21.23	371.8	31/10	2.14	31/08	52.7	10.52	2.56
	1999	1411	119	935	125	19.66	485.4	18/12	0.79	02/08	47.4	8.10	1.11
	2000	1620	137	*1151*	153	24.13					61.3	12.91	1.89
050007 Taw at Taw Bridge C.A: 71.4 km^2	**73..95**	**1266**		**857**		**1.94**	**69.6d**	**27/12 1979**	**0.02**	**23/08 1976**	**5.1**	**0.92**	**0.14**
M.A: EA Local No: 1601015 Sens.: 11.5 B/full: 90.0m^3s^{-1}													
F.A.R: N Level: 85m UE: <.01 FAI: 0.989													
Comment: Weir constructed to replace velocity-area station with natural bed conrol. Dmfs missing from NRFA between 24/08 - 30/11/98 due to construction work. Flashy regime. # Drains Dartmoor (Granite) in the south and is underlain mainly by Culm shales and sandstoness of Carboniferous age centrally. Mainly rural catchment.	1996	1131	89	902	105	2.04	22.1	29/11	0.27	18/08	4.9	1.33	0.31
	1997	1159	92	793	93	1.80	19.1	24/02	0.43	01/08	4.4	0.92	0.49
	1998	1575	124										
	1999	1451	115	1044	122	2.36	**107.7**	**18/12**	0.25	14/09	5.9	1.04	0.26
	2000	1611	127										

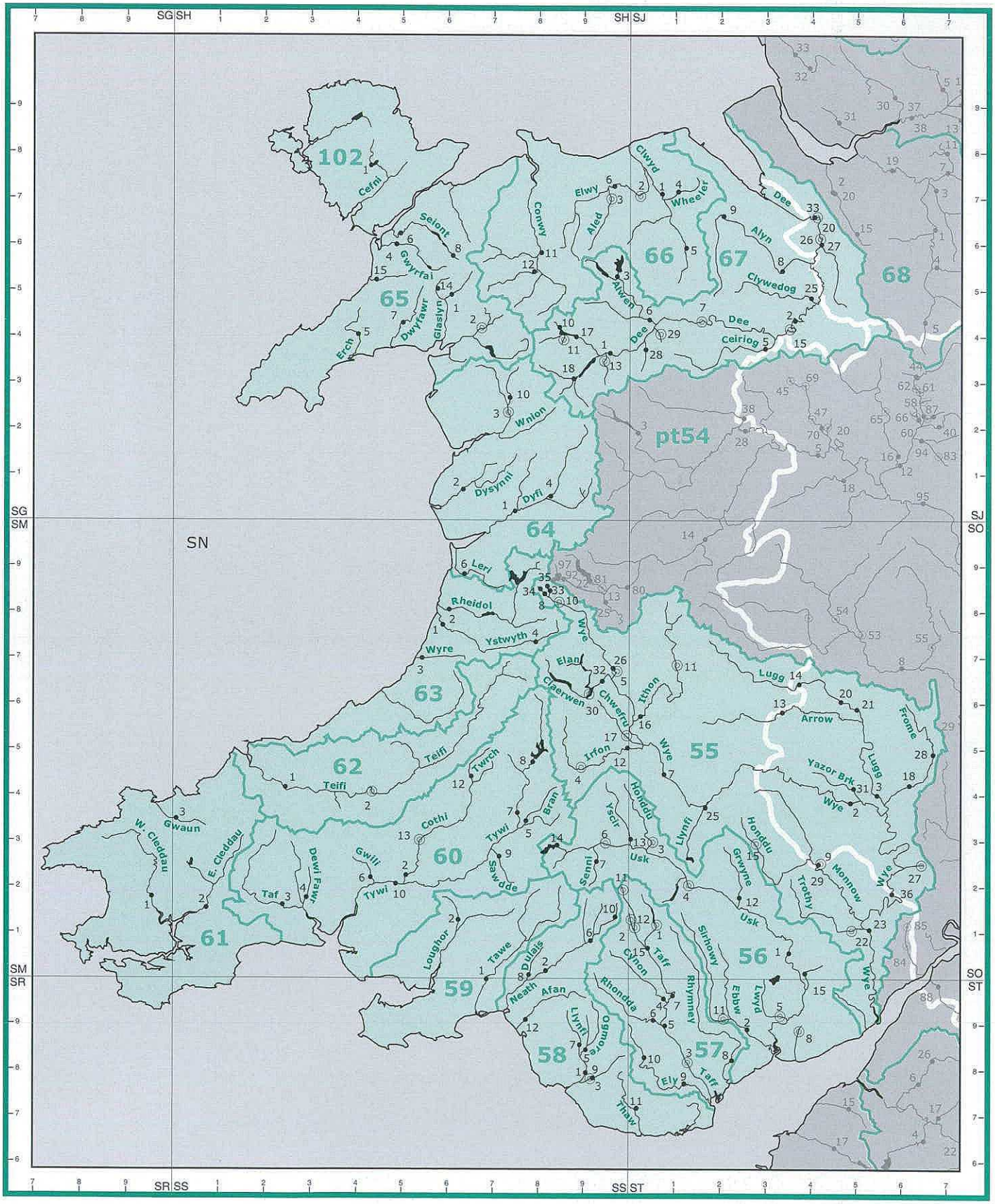
	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
050012 **Yeo at Yeraby** C.A: 53.7 km^2	**68..95**	**1331**		**981**		**1.67**	**80.1**	**28/12 1994**	**0.03**	**19/08 1976**	**3.7**	**0.83**	**0.15**
M.A: EA Local No: 1721024 Sens.: 12.2 B/full: 25.0m^3s^{-1}													
F.A.R: R Level: 110m UE: FAI:													
Comment: Velocity-area station. Natural bed control, some loose stone so susceptible to change. Low flows augmented by Exe/Taw Transfer Scheme (South West Water). Overspill, especially u/s of bridge on rb, but all contained at station. # Drains Devonian shales and s'sts of Exmoor and underlain by Carboniferous Culm Measures in the centre. Rural.	1996	1138	85	696	71	1.18	21.1d	29/11	0.15	18/08	2.8	0.67	0.22
	1997	1312	99	815	83	1.39	59.9	28/11	0.25	07/05	3.2	0.51	0.28
	1998	1710	128	1412	144	2.40	99.3	31/10	0.29	25/05	4.3	1.15	0.33
	1999	1591	120	1088	111	1.85	21.6	18/12	0.23	15/08	4.9	0.87	0.34
	2000	1793	135	1328	135	2.25	23.7	29/10	0.28	01/07	5.2	1.41	0.40
050006 **Mole at Woodleigh** C.A: 327.5 km^2	**65..95**	**1343**		**838**		**8.70**	**188.0**	**09/01 1968**	**0.20**	**27/08 1976**	**21.3**	**4.89**	**0.80**
M.A: EA Local No: 1621002 Sens.: 10.0 B/full: 90.0m^3s^{-1}													
F.A.R: SRPE Level: 48m UE: <.01 FAI: 0.999													
Comment: VA station with rock ledges/gravel shoals as controls. Straight reach, weed affected. Gauging by wading at low flows and off remote bridges at higher flows. Goes out of lh bank. Low flows moderately affected by PWS abstraction and augmentation from Exe - Taw transfers. Quite responsive. # Moderate relief catchment descending from Exmoor through incised, forested valleys. Geology s'sts and shales; headwaters Devonian, Carbonferous lower down. Predominantly rural; grazing and low grade agriculture.	1996	1118	83	636	76	6.58	97.3	29/11	0.59	18/08	16.3	4.00	0.79
	1997	1316	98	737	88	7.66	116.5	28/11	1.39	21/04	20.3	3.38	1.53
	1998	1678	125	1168	139	12.13	190.0	31/10	1.79	26/05	24.0	7.33	2.06
	1999	1578	117	1074	128	11.15	149.0	18/12	1.17	01/08	28.5	5.61	1.87
	2000	1761	131	1287	154	13.33	182.6	29/10	1.56	12/08	28.8	8.71	2.22
050001 **Taw at Umberleigh** C.A: 826.2 km^2	**58..95**	**1165**		**694**		**18.18**	**644.9**	**04/12 1960**	**0.20**	**28/08 1976**	**48.1**	**9.01**	**1.19**
M.A: EA Local No: 1621001 Sens.: 9.2 B/full: 170.0m^3s^{-1}													
F.A.R: RP Level: 14m UE: <.01 FAI: 0.997													
Comment: Velocity-area station, main channel 34m wide, cableway span 40m. Rock step d/s forms control. Bypassing begins at about 3.7m on right bank, but a good rating accommodates this. Significant modification to flows owing to PWS abstraction and by augmentation from the Exe catchment at low flows. Some naturalised flow data available. # Large rural catchment - drains Dartmoor (granite) in south and Devonian shales and sandstones of Exmoor in north. Central area underlain mainly by Culm shales and sandstones (Carboniferous). Agriculture conditioned by grade 3 and 4 soils.	1996	1004	86	528	76	13.80	186.9	29/11	0.84	18/08	35.8	7.76	0.97
	1997	1128	97	566	82	14.83	181.7	28/11	1.88	31/07	39.8	5.56	2.26
	1998	1452	125	931	134	24.39	453.3	31/10	2.49	30/08	54.1	13.15	3.23
	1999	1395	120	896	129	23.48	537.6	18/12	1.48	02/08	59.6	10.61	2.39
	2000	1539	132	1038	150	27.12	618.6	30/10	2.02	12/08	62.4	16.46	2.89
051002 **Horner Water at West Luccombe** C.A: 20.8 km^2	**73..95**	**1456**		**697**		**0.46**	**11.3**	**18/12 1993**	**0.02**	**23/08 1976**	**1.1**	**0.28**	**0.06**
M.A: EA Local No: 510310 Sens.: 57.5 S/full: 6.4m^3s^{-1}													
F.A.R: S Level: 61m UE: <.01 FAI: 0.978													
Comment: Triangular profile Crump weir for low flows, crest 4.5m broad. Plus rated section. All flows contained. Station closed from Sep 1979 to Apr 1985, reopened with telemetry facilities. Nutscale Res. in headwaters. # Drains Exmoor. Steep catchment. Land use rural. Deciduous woodland on valley sides. Geology: composed of Mid Devonian Grits and Lower Devonian ORS.	1996	1322	91	640	92	0.42	3.1	11/02	0.05	18/09	1.0	0.33	0.06
	1997	1469	101	678	97	0.45	7.0	26/06	0.09	02/05	1.1	0.24	0.11
	1998	1940	133	902	129	0.59	9.4	24/10	0.07	03/09	1.2	0.36	0.12
	1999	1951	134	864	124	0.57	7.2	15/01	0.10	30/07	1.3	0.36	0.13
	2000	2184	150	1033	148	0.68	15.1	29/10	0.08	26/08	1.5	0.53	0.09
051003 **Washford at Beggearn Huish** C.A: 36.3 km^2	**66..95**	**1171**		**677**		**0.78**	**9.7**	**26/12 1985**	**0.02**	**26/10 1978**	**1.9**	**0.49**	**0.11**
M.A: EA Local No: 510810 Sens.: 18.6													
F.A.R: N Level: 67m UE: <.01 FAI: 0.992													
Comment: Flat V fibreglass weir, crest 4.5m width, installed in 1982. Velocity-area station for Washford, Williton and Watchet. Out of bank flow before bankfull at station. Fish farm and mill u/s does not affect dmf. Station closed from Jul 1980 to Jun 1983. # Drains Brendon Hills, relief is steep with many deeply incised valleys. Geology Devonian Slates, Siltstones and S'sts. Landuse predominantly rural. Coniferous woodland on valley sides.	1996	1096	94	763	113	0.88	4.0	03/11	0.10	18/09	2.2	0.59	0.12
	1997	1298	111	799	118	0.92	6.6	27/06	0.22	02/05	2.3	0.49	0.25
	1998	1449	124	1041	154	1.20	8.8	31/10	0.18	30/08	2.7	0.68	0.21
	1999	1488	127	1078	159	1.24	9.8	26/12	0.21	01/08	3.0	0.77	0.27
	2000	1666	142	1279	189	1.47	11.6	07/12	0.16	12/08	3.4	1.00	0.19
051001 **Doniford Stream at Swill Bridge** C.A: 75.8 km^2	**67..95**	**921**		**419**		**1.01**	**62.3**	**27/12 1979**	**0.08**	**27/08 1976**	**2.3**	**0.61**	**0.19**
M.A: EA Local No: 510910 Sens.: 18.0 B/full: 68.0m^3s^{-1}													
F.A.R: N Level: 9m UE: <.01 FAI: 0.990													
Comment: Flat V weir installed in Aug 1983. Prior to this velocity-area station with rock control. High flows measured from a gauging bridge constructed u/s of the weir. Flow data unavailable Aug-Dec 1983. # Drains Devonian/Triassic s'sts between Quantock and Brendon Hills. Land use rural.	1996	886	96	454	108	1.09	7.7	12/02	0.25	18/09	2.3	0.86	0.27
	1997	1071	116	475	113	1.14	17.3	26/06	0.36	17/06	2.6	0.77	0.43
	1998	1123	122	568	136	1.36	14.0	05/01	0.31	23/09	2.8	1.03	0.37
	1999	1178	128	600	143	1.44	19.2	19/01	0.32	30/07	2.9	1.00	0.38
	2000	1330	144	776	185	1.86	54.5	07/12	0.21	11/09	4.1	1.27	0.26
052006 **Yeo at Pen Mill** C.A: 213.1 km^2	**63..95**	**889**		**368**		**2.49**	**138.9**	**27/12 1979**	**0.05**	**06/11 1971**	**6.3**	**1.07**	**0.32**
M.A: EA Local No: 520240 Sens.: 14.1 B/full: 40.0m^3s^{-1}													
F.A.R: SPG Level: 24m UE: .02 FAI: 0.965													
Comment: Crump profile triangular cross-section weir for low flows. VA (affected by d/s weed growth) used to measure flows >1.55 m^3s^{-1}. Flows >2m inaccurate. All but highest floods contained. 1989 station moved slightly - problems with stilling well, needs re-rating. Sutton Bingham Res. in headwaters. Medium/low flows influenced by variable abstractions and compensation. # Geology: Oxford Clay and Great Oolite in upper catchment; Yeovil Sands and Inferior Oolite in lower catchment. Land use: predominantly rural.	1996	827	93	328	89	2.21	53.3	09/02	0.29	18/09	5.0	1.10	0.34
	1997	885	100	292	79	1.97	40.9	28/11	0.27	31/07	5.8	0.74	0.33
	1998	988	111	397	108	2.69	50.8	05/01	0.34	01/09	6.2	1.25	0.42
	1999	1020	115	455	124	3.07	60.9	24/12	0.38	01/08	6.3	1.46	0.47
	2000	1235	139	630	171	4.25	68.8	31/12	0.49	12/08	9.6	2.10	0.57
052007 **Parrett at Chiselborough** C.A: 74.8 km^2	**66..95**	**916**		**486**		**1.15**	**57.2**	**30/05 1979**	**0.08**	**23/08 1976**	**2.3**	**0.51**	**0.18**
M.A: EA Local No: 520310 Sens.: 29.5 B/full: 11.6m^3s^{-1}													
F.A.R: E Level: 21m UE: .01 FAI: 1.000													
Comment: Crump weir (breadth: 7.87m) with crest tapping, situated in bridge culvert. Full range station. Throttling of high flows in high range, flow hydrograph exhibits hysteresis. Weir drowning more frequent prior to d/s channel improvements in 1966. Flows calculated from crest tapping prior to 1/4/67 are erroneous due to leak in float well. Minor augmentation from effluent returns. # Geology: predominantly Oxford Clay with small band of Upper Greensand and Gault in headwaters. Land use: rural.	1996	863	94	506	104	1.20	26.8	09/02	0.15	18/09	2.4	0.53	0.17
	1997	927	101	525	108	1.24	27.0	28/11	0.16	31/07	3.3	0.42	0.18
	1998	966	105	595	122	1.41	32.4	01/01	0.17	31/08	3.2	0.58	0.19
	1999	1005	110	606	125	1.44	36.3	24/12	0.17	13/09	3.0	0.59	0.19
	2000	1264	138	963	198	2.28	48.9	31/12	0.19	12/08	6.8	0.80	0.22
052004 **Isle at Ashford Mill** C.A: 90.1 km^2	**62..95**	**890**		**458**		**1.31**	**44.2**	**28/09 1991**	**0.09**	**28/06 1964**	**2.9**	**0.67**	**0.26**
M.A: EA Local No: 520110 Sens.: 22.5 B/full: 33.0m^3s^{-1}													
F.A.R: GE Level: 15m UE: .01 FAI: 0.980													
Comment: Crump profile weir for low flows, crest 6.71m broad. Modular limit of 0.6m. Velocity-area station for higher flows (d/s weed growth affects the stability of the S-D relationship). Flood plain storage in catchment. Bankfull: 2.438m. Bypassing of station occurs at high flows. Minor gw abstractions in catchment. Evidence of mill/factory discharges on charts. # Impermeable catchment - predominantly Lower Lias clays. Very responsive. Land use: rural.	1996	884	99	462	101	1.32	22.1	08/01	0.25	21/07	2.9	0.76	0.30
	1997	1022	115	480	105	1.37	27.3	06/08	0.27	01/06	3.1	0.63	0.35
	1998	1021	115	554	121	1.58	25.9	26/12	0.31	19/08	3.3	0.86	0.37
	1999	1128	127	662	145	1.89	27.8	24/12	0.30	01/08	3.8	0.82	0.36
	2000	1263	142	739	161	2.10	29.1	30/10	0.36	13/09	4.9	1.08	0.43
052014 **Tone at Greenham** C.A: 57.2 km^2	**67..95**	**1113**		**563**		**1.02**	**37.5**	**09/02 1974**	**0.01**	**07/10 1975**	**2.3**	**0.61**	**0.14**
M.A: EA Local No: 520540 Sens.: 12.1 B/full: 19.0m^3s^{-1}													
F.A.R: S Level: 77m UE: <.01 FAI: 0.937													
Comment: Compound Flat V Crump profile weir. Prior to Aug 1979 velocity-area station with unstable bed. At high flows estimates made from debris marks as surrounding land floods. Since 1981 flows above 9.66 m^3s^{-1} are truncated. Low flows maintained from Clatworthy Res. Abstractions for supply. # The upper part of the catchment drains the Brendon Hills. Geology: predominantly ORS. Land use: rural.	1996	1031	93	437	78	0.79	5.1	12/02	0.11	19/09	1.9	0.61	0.13
	1997	1259	113	545	97	0.99	7.8	27/11	0.21	17/06	2.6	0.52	0.25
	1998	1406	126	732	130	1.33	11.7	05/01	0.22	23/09	3.1	0.74	0.25
	1999	1438	129	717	127	1.30	14.6	19/01	0.17	01/08	3.2	0.72	0.24
	2000	1547	139	819	145	1.48	26.8	07/12	0.17	11/08	3.2	0.90	0.19
052005 **Tone at Bishops Hull** C.A: 202.0 km^2	**61..95**	**982**		**478**		**3.06**	**112.7**	**11/07 1968**	**0.18**	**22/08 1976**	**6.6**	**1.76**	**0.59**
M.A: EA Local No: 520560 Sens.: 17.7 S/full: 130.0m^3s^{-1}													
F.A.R: SP Level: 17m UE: <.01 FAI: 0.979													
Comment: Crump profile weir (breadth 12.2m), original crest tapping now removed. Full range. Prior to March 1968, a velocity area station - flows were unreliable below 1.42 m^3s^{-1}. Clatworthy and smaller Luxhay Reservoirs in headwaters. Compensation flow maintains low flows. Reservoirs not large enough to influence fairly rapid response to rainfall. Minor surface water abstractions for PWS. # Geology: predominantly sandstone and marls. Land use: rural.	1996	920	94	428	90	2.73	45.6	08/01	0.51	18/09	5.8	2.00	0.57
	1997	1107	113	488	102	3.12	98.5	06/08	0.72	17/06	7.0	1.54	0.83
	1998	1196	122	626	131	4.01	47.2	05/01	0.83	30/08	8.0	2.53	0.92
	1999	1242	126	659	138	4.22	62.8	19/01	0.82	31/07	9.3	2.51	1.03
	2000	1342	137	740	155	4.73	71.8	30/10	0.76	13/09	10.4	2.88	0.90

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
052025 Hillfarrance at Milverton C.A: 27.8 km^2	**92..95**	**1109**		**651**		**0.57**	**12.4**	**30/11**	**0.09**	**19/08**	**1.4**	**0.32**	**0.12**
M.A: EA Local No: 520550 Sens.:								**1992**		**1995**			
F.A.R: Level: 63m UE: FAI:													
Comment: Flat V designed by Flood Defence. STW u/s of site, with pig processing factory (with a stream support borehole) 100m u/s of that. Meanders d/s of the site cause backing up at high flows, with inundation before structure full (1.15m) and extensive bypassing.	1996	953	86	490	75	0.43	4.6	19/11	0.11	17/09	0.9	0.36	0.12
	1997	1196	108	563	86	0.50	6.0	29/08	0.13	15/06	1.1	0.31	0.16
	1998	1312	118	745	114	0.66	*11.8*	*13/05*	0.14	03/08	1.4	0.46	0.17
	1999	1351	122	806	124	0.71	**14.6**	**19/01**	0.16	01/08	1.5	0.47	0.19
	2000	1428	129										
052003 Halsewater at Halsewater C.A: 87.8 km^2	**61..95**	**869**		**390**		**1.09**	**42.0**	**27/12**	**0.13**	**23/08**	**2.2**	**0.71**	**0.27**
M.A: EA Local No: 520580 Sens.: 12.6 B/full: 7.0m^3s^{-1}								**1979**		**1976**			
F.A.R: N Level: 17m UE: <.01 FAI: 0.990													
Comment: Flat V weir, 0.5km u/s of confluence with R. Tone. Velocity-area station prior to July 1981. Flows in excess of 7 m^3s^{-1} result in out of bank flow approx. 180m u/s of station and bypassing occurs. Above 18.7m aOD flows are affected by backwater from the R. Tone. # Catchment - mixed geology: predominantly Jurassic limestone, sandstone and marl. Land use: predominantly rural.	1996	825	95	406	104	1.13	8.0	25/03	0.25	18/09	2.3	0.84	0.29
	1997	1019	117	445	114	1.24	10.6	06/08	0.36	17/06	2.5	0.82	0.41
	1998	1046	120	532	136	1.48	9.8	05/01	0.35	30/08	3.1	1.09	0.38
	1999	1113	128	567	145	1.58	11.6	19/01	0.36	01/08	3.6	1.03	0.42
	2000	1206	139	670	172	1.86	12.5	30/10	0.39	13/09	4.2	1.27	0.44
052016 Currypool Stream at Currypool Farm C.A: 15.7 km^2	**71..95**	**915**		**414**		**0.21**	**7.9**	**01/12**	**0.03**	**26/08**	**0.4**	**0.14**	**0.06**
M.A: EA Local No: 520710 Sens.: 45.0								**1976**		**1976**			
F.A.R: N Level: 49m UE: <.01 FAI: 1.000													
Comment: Crump profile weir, crest 4m broad. Velocity-area station for flows >1.654 m^3s^{-1}. # Headwaters drain the Quantock Hills. Geology: predominantly Old Red S'st and Marl. Land use: agricultural.	1996	867	95	416	100	0.21	2.0	12/02	0.06	12/10	0.4	0.17	0.06
	1997	1051	115	462	112	0.23	*3.7*	*05/08*	0.08	17/06	0.4	0.16	0.09
	1998	1121	123	575	139	0.29	3.1	31/10	0.09	20/09	0.5	0.21	0.10
	1999	1160	127	556	134	0.28	3.5	19/01	0.09	02/08	0.6	0.20	0.10
	2000	1292	141	651	157	0.32	5.6	07/12	0.08	11/09	0.7	0.24	0.10
052011 Cary at Somerton C.A: 82.4 km^2	**65..95**	**736**		**300**		**0.78**	**13.7**	**31/05**	**>0.00**	**23/08**	**2.0**	**0.26**	**0.04**
M.A: EA Local No: 520810 Sens.: 38.0 B/full: 10.0m^3s^{-1}								**1979**		**1976**			
F.A.R: GE Level: 9m UE: .01 FAI: 1.000													
Comment: Compound Crump profile weir, approx. 330m u/s of Cary Bridge. Centre section 3.05m broad, two side sections 1.22m broad. Velocity-area station for flows greater than 4.4 m^3s^{-1} (d/s summer weed growth affects the stability of stage-discharge relationship). Full range station. Banks contain all but exceptional floods. Minor gw abstractions and some augmentation from effluent returns. # Geology: predominantly Lower Lias and Oolitic Limestone. Land use: rural.	1996	663	90	251	84	0.65	8.1	12/02	0.04	18/09	1.6	0.27	0.05
	1997	734	100	252	84	0.66	8.7	07/08	0.05	02/08	1.8	0.21	0.06
	1998	866	118	405	135	1.06	10.2	02/11	0.08	01/09	2.3	0.47	0.10
	1999	912	124	523	174	1.37	11.5	26/12	0.06	31/07	4.4	0.57	0.08
	2000	1003	136	572	191	1.49	12.5	31/10	0.08	13/09	3.8	0.73	0.11
052026 Alham at Higher Alham C.A: 5.1 km^2	**83..95**	**1017**		**875**		**0.14**	**2.2**	**20/12**	**0.01**	**16/09**	**0.3**	**0.10**	**0.03**
M.A: EA Local No: 520910 Sens.:								**1989**		**1984**			
F.A.R: Level: m UE: FAI:													
Comment: Standard Flat V weir, 2.5m wide, 1:10 cross-slope. Station opened in June 1982 to investigate the effects on groundwater due to quarrying. Low flow control, structure drowns out at 0.3m. Some flows in 1984 and 1986 suspect due to sticking chart recorder, flows in 1985 missing due to chart recorder failure; replaced at end of 1986. # Limestone. Land use: pasture.	1996	894	88	710	81	0.12	0.5	18/11	0.03	02/09	0.2	0.09	0.04
	1997	934	92	580	66	0.09	0.6	11/02	0.03	25/09	0.2	0.06	0.03
	1998	1307	129										
	1999	1233	121	1126	129	0.18	1.4	19/01	0.04	18/07	0.4	0.15	0.05
	2000	1415	139										
052010 Brue at Lovington C.A: 135.2 km^2	**64..95**	**888**		**431**		**1.85**	**95.5**	**30/05**	**0.09**	**22/08**	**4.3**	**0.95**	**0.24**
M.A: EA Local No: 520920 Sens.: 21.9 B/full: 80.0m^3s^{-1}								**1979**		**1976**			
F.A.R: N Level: 20m UE: <.01 FAI: 0.998													
Comment: Crump profile weir for low flows, crest 6.71m broad. Velocity-area station for flows >2.2 m^3s^{-1}, (d/s summer weed growth affects the stability of the S-D relationship). Reliable extension of rating to bankfull; exceptional flood flows less reliable but section is deep and contains all but extreme peaks. Station rebuilt in 1998: no dmfs 27/7 - 1/11/98. # Headwaters fed by Mendip and Salisbury Plain springs. Geology: Oxford Clay and Great Oolite in upper catchment; Yeovil Sands and Inferior Oolite in lower catchment. Very pronounced hydrograph peaks. Land use: predominantly rural.	1996	778	88	328	76	1.40	23.6	25/11	0.17	18/09	3.1	0.79	0.20
	1997	808	91	301	70	1.29	27.2	28/11	0.21	05/10	3.3	0.55	0.23
	1998	1095	123										
	1999	1063	120	660	153	2.83	52.2	18/12	0.35	26/07	6.8	1.31	0.43
	2000	1219	137	783	182	3.35	66.4	30/10	0.38	13/09	7.3	1.99	0.52
052009 Sheppey at Fenny Castle C.A: 59.6 km^2	**64..95**	**955**		**570**		**1.08**	**9.6**	**17/12**	**0.10**	**13/09**	**2.2**	**0.80**	**0.25**
M.A: EA Local No: 521010 Sens.: 18.8 B/full: 12.0m^3s^{-1}								**1965**		**1964**			
F.A.R: GE Level: 6m UE: .03 FAI: 1.000													
Comment: Crump profile weir for low flows, crest 5.18m broad. Velocity-area station for flows greater than 1.84 m^3s^{-1} (d/s summer weed growth affects stability of S-D relationship - station drowns out). Full range station. All flows contained. Minor gw abstractions in catchment. Some augmentation from effluent returns. # Mixed geology: Upper catchment - Carboniferous L'st, Lower catchment - s'sts. Land use: rural.	1996	880	92	458	80	0.86	5.4	19/11	0.21	04/08	1.8	0.73	0.23
	1997	932	98	413	72	0.78	4.1	20/11	0.25	02/08	1.7	0.54	0.28
	1998	1218	128	684	120	1.29	8.5	31/10	0.34	30/08	2.5	1.00	0.40
	1999	1245	130	737	129	1.39	8.0	26/12	0.28	01/08	2.9	1.01	0.36
	2000	1352	142	959	168	1.81	8.8	29/10	0.30	10/09	3.6	1.56	0.36
052017 Congresbury Yeo at Iwood C.A: 66.6 km^2	**73..95**	**957**		**346**		**0.73**	**15.4**	**28/01**	**0.14**	**17/10**	**1.6**	**0.46**	**0.21**
M.A: EA Local No: 521410 Sens.: 18.5 S/full: 14.5m^3s^{-1}								**1975**		**1989**			
F.A.R: S Level: 7m UE: .01 FAI: 0.890													
Comment: Crump weir, crest 5m broad. Bankfull 1.3m. Station bypassed at high flows. Station closed Feb 1975 to Aug 1985, reopened with telemetry facilities. Very patchy record prior to 1975. Flood warning station for Congresbury approx. 1km d/s. Blagdon reservoir (approx. 2 sq.km) situated close to headwaters. # River rises from W slopes of the Mendips. Land use: predominantly rural with some small settlements. Geology: Carboniferous L'st, Keuper Marl and estuarine alluvium.	1996	917	96	287	83	0.60	7.9	24/11	0.20	13/09	1.1	0.53	0.21
	1997	985	103	263	76	0.56	6.6	26/12	0.22	02/08	1.1	0.38	0.24
	1998	1202	126	503	145	1.06	9.0	31/10	0.25	24/09	2.1	0.79	0.27
	1999	1288	135	541	156	1.14	12.0	19/01	0.22	05/08	2.6	0.65	0.25
	2000	1404	147	711	205	1.50	11.7	07/12	0.33	26/08	3.1	1.07	0.36
052015 Land Yeo at Wraxall Bridge C.A: 23.3 km^2	**71..95**	**912**		**332**		**0.25**	**12.4**	**04/05**	**>0.00**	**06/09**	**0.5**	**0.15**	**0.05**
M.A: EA Local No: 521510 Sens.: 52.0 B/full: 28.8m^3s^{-1}								**1988**		**1976**			
F.A.R: S Level: 11m UE: .02 FAI: 0.939													
Comment: Triangular profile Crump weir, crest 5m wide. All flows contained. Closed from Sep 1979 to May 1985. Reopened following installation of telemetry. River weedy but weir cleared regularly. Barrow Gurney reservoirs in catchment (approx. 0.75 sq.km). # Drains Dundry Hill. Moderate relief in headwaters, low relief in lower reaches. Mixed geology of lower and middle Coal Measures, Carboniferous oolitic l'st and Triassic marls and s'sts. Land use predominantly rural, some urbanisation.	1996	860	94	305	92	0.22	1.3	11/02	0.05	16/09	0.4	0.17	0.06
	1997	958	105	296	89	0.22	2.0	31/08	0.07	07/06	0.5	0.13	0.07
	1998	1130	124	476	143	0.35	*4.6*	*31/10*	0.06	11/10	0.7	0.25	0.07
	1999	1259	138	546	164	0.40	7.1	19/01	0.07	14/09	0.8	0.28	0.09
	2000	1320	145	660	199	0.49	6.7	30/10	0.07	11/08	1.0	0.37	0.09
053023 Sherston Avon at Fosseway C.A: 89.7 km^2	**76..95**	**859**		**339**		**0.96**	**11.9**	**30/11**	**0.03**	**28/11**	**2.4**	**0.54**	**0.11**
M.A: EA Local No: 530550 Sens.: 20.0 S/full: 20.4m^3s^{-1}								**1992**		**1978**			
F.A.R: G Level: 77m UE: <.01 FAI: 1.000													
Comment: Flat V Crump profile weir, crest 7m broad. Full range station. Flows augmented by gw scheme in catchment. Gate activity u/s may affect flows: Artificial influences produce the lowest flows on record in Nov 1978. # Geology: predominantly Oolitic L'st. Land use: rural.	1996	696	81	277	82	0.78	3.5	12/01	0.13	27/09	1.7	0.62	0.15
	1997	791	92	246	73	0.70	4.2	26/12	0.15	21/06	2.1	0.36	0.17
	1998	955	111	410	121	1.17	7.4	05/01	0.15	28/07	2.9	0.68	0.18
	1999	1053	123	477	141	1.36	**12.3**	**19/01**	0.17	30/07	3.1	0.91	0.23
	2000	1140	133	550	162	1.56	**13.6**	**30/10**	0.16	13/09	3.6	1.06	0.19
053024 Tetbury Avon at Brokenborough C.A: 73.6 km^2	**78-95**	**848**		**311**		**0.73**	**18.9**	**02/12**	**0.03**	**22/10**	**1.8**	**0.34**	**0.06**
M.A: EA Local No: 530650 Sens.: 25.0 S/full: 5.3m^3s^{-1}								**1992**		**1990**			
F.A.R: GE Level: m UE: FAI:													
Comment: Flat V Crump profile weir, crest 7m. Low flow station. Rating not extended above the measuring capacity of the weir and peaks on the hydrograph are truncated. Groundwater abstractions in catchment. Some augmentation from effluent returns. # Geology: predominantly Oolitic Limestone. Land use: rural.	1996	692	82	154	50	0.36	1.4	12/01	0.06	27/07	0.8	0.28	0.09
	1997	776	92	148	48	0.35	5.7	25/02	0.07	27/07	0.9	0.17	0.10
	1998	965	114	265	85	0.62	5.9	04/01	0.09	27/07	1.4	0.42	0.11
	1999	1065	126	318	102	0.74	11.4	19/01	0.10	05/08	1.4	0.49	0.15
	2000	1169	138	447	144	1.04	13.6	29/10	0.12	24/07	1.9	0.57	0.14

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
053019	**Woodbridge Brook at Crabb Mill** C.A: 46.6 km^2	**69..95**	**750**		**376**		**0.56**	**55.9**	**30/11 1992**	**0.00**	**01/09 1976**	**1.1**	**0.20**	**0.03**
M.A: EA	Local No: 530130 Sens.: 31.0 S/full: 1.4m^3s^{-1}													
F.A.R: G	Level: 66m UE: <.01 FAI: 0.982													
Comment: Compound rectangular thin-plate weir (no divide piers). 1.52m wide centre section and two 0.76m broad wings. Low flow station only. Measuring capacity of weir is 1.4 m^3s^{-1}, above this the rating is only usable to estimate flows. Substantial gw abstractions in catchment. # Impermeable clay catchment. Land use: predominantly rural.		1996	573	76	201	53	0.30	8.8	26/03	0.01	24/10	0.6	0.16	0.02
		1997	688	92	195	52	0.29	7.2	24/02	0.02	18/08	0.6	0.13	0.03
		1998	926	123	560	149	0.83	36.9	26/12	0.02	12/10	1.4	0.27	0.04
		1999	936	125	513	136	0.76	11.8	23/12	0.08	15/09	1.6	0.31	0.10
		2000	1060	141	948	252	1.40	95.3	30/10	0.04	12/09	2.9	0.33	0.07
053020	**Gauze Brook at Rodbourne** C.A: 28.2 km^2	**68..95**	**796**		**305**		**0.27**	**7.2**	**28/01 1985**	**>0.00**	**10/08 1976**	**0.7**	**0.13**	**0.02**
M.A: EA	Local No: 530140 Sens.: 31.0 S/full: 0.6m^3s^{-1}													
F.A.R: G	Level: 66m UE: <.01 FAI: 1.000													
Comment: Rectangular thin-plate weir. Measuring capacity of weir 0.566 m^3s^{-1}, discharges above this are estimated. Primarily a low flow station; monitors the impact of groundwater abstraction/ recharge on river flow: may cause abrupt rises in flow in summer months. # Predominantly limestone catchment. Land use: rural.		1996	651	82	217	71	0.19	1.8	25/03	0.01	07/08	0.5	0.11	0.01
		1997	770	97	196	64	0.18	2.0	20/05	0.01	09/06	0.5	0.08	0.02
		1998	942	118	361	118	0.32	9.0	26/12	0.02	29/07	0.7	0.15	0.03
		1999	983	123	399	131	0.36	11.1	19/01	0.03	15/07	0.8	0.18	0.04
		2000	1088	137	533	175	0.48	25.0	29/10	0.02	13/09	1.1	0.22	0.03
053008	**Avon at Great Somerford** C.A: 303.0 km^2	**64-95**	**821**		**343**		**3.30**	**107.7**	**11/07 1968**	**0.11**	**02/09 1976**	**8.1**	**1.80**	**0.33**
M.A: EA	Local No: 530150 Sens.: 16.1													
F.A.R: G	Level: 58m. UE: <.01 FAI: 0.989													
Comment: Compound Crump profile weir - low flow crest between two flanking sections. Situated 90m d/s of Great Somerford road bridge. Full range station. All except extreme flows (e.g. Jul 1968) contained. Flows augmented by gw scheme in catchment. # Geology: mainly Oolitic L'st with lb tributaries draining off clays. Land use: predominantly rural.		1996	656	80	237	69	2.27	19.0	25/03	0.30	06/10	5.1	1.64	0.33
		1997	761	93	221	64	2.13	18.8	26/12	0.31	29/07	6.1	0.91	0.38
		1998	946	115	426	124	4.09	37.9	26/12	0.42	31/08	9.7	2.29	0.49
		1999	1013	123	479	140	4.60	63.4	20/01	0.53	31/07	10.9	2.86	0.75
		2000	1118	136	576	168	5.52	84.5	30/10	0.31	29/08	13.1	3.19	0.66
053013	**Marden at Stanley** C.A: 99.2 km^2	**70-95**	**762**		**377**		**1.19**	**40.1**	**20/01 1985**	**0.10**	**26/08 1976**	**2.5**	**0.76**	**0.25**
M.A: EA	Local No: 530850 Sens.: 5.6 S/full: 35.5m^3s^{-1}													
F.A.R: PE	Level: 47m UE: .02 FAI: 0.980													
Comment: Trapezoidal critical depth flume. Full range station. Prior to Jul 1969 level only station. Bridge 100 150m u/s causes throttling at high flows. Minor surface water abstractions and discharges in catchment. # Predominantly clay catchment, Chalk outcrop in headwaters. Land use: rural.		1996	585	77	258	68	0.81	9.6	12/02	0.21	14/09	1.5	0.55	0.25
		1997	697	91	213	56	0.67	7.4	24/02	0.20	20/08	1.5	0.39	0.22
		1998	928	122	536	142	1.69	20.4	31/10	0.37	23/09	3.2	1.15	0.42
		1999	895	117	495	131	1.56	14.1	16/01	0.33	13/09	3.2	1.08	0.39
		2000	1036	136	677	180	2.12	43.3	30/10	0.44	24/08	4.5	1.41	0.49
053002	**Semington Brook at Semington** C.A: 157.7 km^2	**53..95**	**744**		**283**		**1.42**	**50.0**	**27/12 1979**	**0.06**	**03/08 1976**	**2.7**	**0.83**	**0.26**
M.A: EA	Local No: 530950 Sens.: 21.2													
F.A.R: GE	Level: 33m UE: .03 FAI: 0.991													
Comment: Formalised trapezoidal section with cableway, replaced velocity-area station d/s (superseded due to low banks and backwater from R. Avon at high flows). Flood records for period prior to Apr 1970 are therefore poor. Station rated up to 19.83 m^3s^{-1}. Some gw pumping and surface water abstractions. Mill operation u/s. # Catchment flat and low lying, mainly clay with steeper Chalk eastern boundaries. Land use: predominantly rural.		1996	570	77	226	80	1.13	15.9	12/02	0.34	24/07	1.7	0.71	0.50
		1997	662	89	182	64	0.91	*13.9*	*20/11*	0.37	14/11	1.5	0.57	0.45
		1998	865	116	395	140	1.97	25.8	01/11	0.49	12/08	3.5	1.13	0.52
		1999	890	120	446	158	2.23	29.3	25/12	0.46	29/07	5.5	1.09	0.56
		2000	1022	137	*611*	216	3.04					7.4	1.44	0.68
053029	**Biss at Trowbridge** C.A: 77.6 km^2	**84-95**	**772**		**339**		**0.83**	**30.4**	**20/12 1989**	**0.08**	**04/08 1992**	**1.9**	**0.40**	**0.16**
M.A: EA	Local No: 531050 Sens.: 16.1													
F.A.R: I	Level: 32m UE: FAI:													
Comment: Crump profile Flat V weir (1:10), 7.13m wide, set in deep culvert with vertical walls. Good approach, large d/s fall. Moderate influence on low flows by abstractions and discharges. # Moderate relief catchment situated along Frome gap. Drains Chalk scarp to SE. Underlying geology: Jurassic clays. Predominantly rural; arable farming. Contains Westbury.		1996	632	82	217	64	0.53	6.1	12/02	0.09	18/09	1.2	0.28	0.10
		1997	700	91	172	51	0.42	9.4	17/02	0.08	19/08	1.0	0.18	0.07
		1998	912	118	373	110	0.92	11.8	31/10	0.11	12/08	1.9	0.46	0.13
		1999	939	122	383	113	0.94	9.3	20/01	0.13	31/07	2.4	0.46	0.16
		2000	1074	139	533	157	1.31	15.7	30/10	0.20	12/09	3.1	0.71	0.24
053025	**Mells at Vallis** C.A: 119.0 km^2	**80-95**	**1082**		**433**		**1.63**	**40.3**	**13/10 1993**	**0.11**	**29/08 1989**	**3.8**	**0.98**	**0.20**
M.A: EA	Local No: 531240 Sens.: 21.3 S/full: 36.4m^3s^{-1}													
F.A.R: E	Level: 68m UE: .01 FAI: 0.951													
Comment: Crump profile weir, crest 6m broad. Full range station. Minor augmentation from effluent returns. # Geology: predominantly Carboniferous L'st with Coal Measures. Land use: rural.		1996	921	85	346	80	1.30	11.8	24/11	0.20	15/09	2.8	1.05	0.24
		1997	980	91	324	75	1.22	12.8	17/02	0.16	05/10	3.0	0.63	0.31
		1998	1299	120	616	142	2.33	32.2	31/10	0.44	24/09	4.5	1.58	0.55
		1999	1303	120	598	138	2.26	20.4	19/01	0.27	25/07	5.1	1.50	0.46
		2000	1453	134	755	174	2.84	33.5	29/10	0.38	08/09	6.0	2.11	0.44
053007	**Frome(Somerset) at Tellisford** C.A: 261.6 km^2	**61..95**	*965*		**451**		**3.74**	**108.1**	**10/07 1968**	**0.20**	**27/08 1976**	**8.6**	**2.14**	**0.60**
M.A: EA	Local No: 531160 Sens.: 4.8 S/full: 113.0m^3s^{-1}													
F.A.R: PG	Level: 35m UE: .02 FAI: 0.967													
Comment: Trapezoidal critical depth flume. Full range station. Deeply incised channel at station - all but extreme floods contained (although some overbank u/s storage). Pumping station u/s of gauging station. Substantial groundwater abstractions in catchment. # Predominantly limestone with impermeable clays in Frome Gap and Coal Measures in Mells Valley. Responsive catchment, however, detention lakes 5 to 6km u/s may truncate peaks. Land use: predominantly rural.		1996	826	86	354	78	2.93	31.6	24/11	0.45	23/07	6.3	2.13	0.53
		1997	876	91	320	71	2.66	43.9	17/02	0.42	05/10	6.8	1.30	0.63
		1998	1170	121	600	133	4.97	79.0	31/10	0.88	25/09	10.3	2.76	1.10
		1999	1170	121	592	131	4.91	47.9	19/01	0.67	25/07	11.5	2.81	0.93
		2000	1335	138	761	169	6.29	82.6	30/10	0.99	13/09	14.9	3.97	1.13
053009	**Wellow Brook at Wellow** C.A: 72.6 km^2	**66-95**	**1019**		**554**		**1.27**	**29.5**	**10/07 1968**	**0.09**	**10/08 1976**	**2.8**	**0.84**	**0.23**
M.A: EA	Local No: 531360 Sens.: 6.7 S/full: 42.5m^3s^{-1}													
F.A.R: N	Level: 44m UE: .04 FAI: 0.987													
Comment: Trapezoidal critical depth flume. Full range station. Slight bypassing on right-hand bank. Backing up from bridge d/s occurred during Jul 1968 flood (flow circa 30 m^3s^{-1}). MAF gauged adequately. # Mixed geology - Lias and Oolitic L'st. Land use: predominantly rural.		1996	880	86	474	86	1.09	10.4	24/11	0.20	17/09	2.3	0.87	0.23
		1997	974	96	469	85	1.08	15.7	17/02	0.28	02/08	2.4	0.61	0.32
		1998	1191	117	690	125	1.59	12.2	31/10	0.31	30/08	3.3	1.05	0.37
		1999	1271	125	765	138	1.76	13.1	26/12	0.26	26/07	4.1	1.15	0.35
		2000	1382	136	*869*	157	1.99					**4.2**	**1.47**	**0.42**
053005	**Midford Brook at Midford** C.A: 147.4 km^2	**61..95**	**978**		**473**		**2.21**	**55.7**	**10/07 1968**	**0.16**	**19/08 1976**	**4.9**	**1.43**	**0.41**
M.A: EA	Local No: 531370 Sens.: 4.9 S/full: 56.0m^3s^{-1}													
F.A.R: PGE	Level: 27m UE: .03 FAI: 0.993													
Comment: Trapezoidal critical depth flume 2.4km u/s of confluence with R. Avon. Full range station. Algal growth affects sensitivity at low flows. Bypassing may occur on left-hand bank above 3m stage. # Predominantly impermeable catchment - Lias with Coal Measures. Deep steep sided valleys in catchment, responds rapidly to rainfall. Land use - rural.		1996	856	88	432	91	2.01	22.6	24/11	0.39	18/09	4.1	1.60	0.46
		1997	939	96	419	89	1.96	35.0	17/02	0.47	23/08	4.4	1.07	0.60
		1998	1150	118	625	132	2.92	29.2	24/10	0.61	30/08	5.9	1.91	0.67
		1999	1222	125	696	147	3.25	36.3	19/01	0.56	02/08	7.4	2.08	0.74
		2000	1343	137	816	173	3.81	53.1	30/10	0.68	12/09	7.9	2.71	0.76
053028	**By Brook at Middlehill** C.A: 102.0 km^2	**82-95**	**884**		**490**		**1.59**	**13.1**	**30/11 1992**	**0.14**	**20/09 1990**	**4.1**	**0.90**	**0.22**
M.A: EA	Local No: 530450 Sens.: 13.0													
F.A.R: P	Level: 28m UE: FAI:													
Comment: Flat V weir. Wing walls at 2m should contain most floods. Low flow station. Minor surface water abstractions in catchment. Gate movement u/s. # Geology: predominantly Oolitic L'st and Lias. Land use: rural.		1996	726	82	377	77	1.22	4.8	13/01	0.14	23/09	2.6	0.99	0.21
		1997	840	95	368	75	1.19	5.2	02/12	0.24	23/08	3.4	0.61	0.31
		1998	1019	115	589	120	1.91	12.3	05/01	0.26	23/09	4.6	1.07	0.30
		1999	1055	119	637	130	2.06	12.3	26/12	0.32	02/08	4.5	1.40	0.39
		2000	1164	132	782	160	2.52	13.2	31/10	0.27	12/09	5.6	1.78	0.33

				Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
053018	**Avon at Bathford**		C.A: 1552.0 km^2	**69..95**	*835*		**344**		**16.91**	**300.5**	**28/12 1979**	**1.09**	**27/08 1976**	**36.7**	**10.37**	**2.90**
M.A: EA	Local No: 530180	Sens.: 9.8														
F.A.R: RPGE	Level: 18m	UE: .02	FAI: 0.988													
Comment: VA station with cableway, next to railway bridge 4km u/s of Bath (replacement for Bath St James 53003). Situated immediately d/s of confluence with Bybrook. Widely inundated in flood conditions, but all flows contained through bridge. Deep section and low velocities render flows below 5 m^3s^{-1} inaccurate, so synthetic values derived from all sites above Bathford (local no. 530179). Flows augmented by gw scheme in catchment. # Mixed geology - predominantly clays and l'st with eastern tributaries rising from Chalk. Land use: mainly rural, some urbanisation.				1996	687	82	250	73	12.29	82.2	12/02	2.19	23/09	26.9	9.06	2.41
				1997	776	93	*220*	64	10.84					27.0	5.69	2.67
				1998	994	119	537	156	26.42	192.0	01/11	3.04	30/08	62.6	14.60	3.63
				1999	1021	122	574	167	28.25	191.0	25/12	3.64	02/08	70.1	17.17	5.04
				2000	1149	138	705	205	34.60	272.7	30/10	3.88	30/08	81.8	21.15	4.76
053017	**Boyd at Bitton**		C.A: 47.9 km^2	**73..95**	**800**		**363**		**0.55**	**27.2**	**30/05 1979**	**0.01**	**28/08 1976**	**1.4**	**0.25**	**0.05**
M.A: EA	Local No: 530350	Sens.: 25.0	S/full: 94.0m^3s^{-1}													
F.A.R: N	Level: 16m	UE: .01	FAI: 0.999													
Comment: Flat V Crump profile weir, crest 8m broad. Situated in rectangular sheet-piled section; 4m deep. Full range station. Maintenance difficult. # Predominantly clay catchment. Land use: mainly rural with some urbanisation.				1996	704	88	263	72	0.40	5.1	19/11	0.03	18/09	1.0	0.25	0.04
				1997	801	100	280	77	0.43	5.9	26/12	0.05	17/08	1.1	0.17	0.07
				1998	956	120	426	117	0.65	13.9	06/03	0.05	20/08	1.4	0.29	0.06
				1999	1036	130	497	137	0.76	18.7	19/01	0.06	28/07	1.7	0.39	0.08
				2000	1122	140	573	158	0.87	25.4	29/10	0.07	13/09	2.0	0.49	0.09
053004	**Chew at Compton Dando**		C.A: 129.5 km^2	**58..95**	**1008**		**267**		**1.10**	**67.5**	**30/05 1979**	**0.14**	**01/08 1962**	**2.2**	**0.66**	**0.32**
M.A: EA	Local No: 531450	Sens.: 4.8	S/full: 85.0m^3s^{-1}													
F.A.R: SP	Level: 17m	UE: <.01	FAI: 0.843													
Comment: Trapezoidal critical depth flume. Full range station but overestimates flows above 2m owing to backing up. Flow record unreliable for a year after the July 1968 flood due to bank collapse and accumulated debris. Large storage reservoir in headwaters - Chew Valley Lake. Seasonal compensation flow. Significant surface water abstractions for PWS and industry. Monthly naturalised flow series available to 1980. # Mixed geology - predominantly clay, some Coal Measures. Land use: rural.				1996	929	92	239	90	0.98	19.0	24/11	0.34	19/08	1.7	0.82	0.35
				1997	978	97	233	87	0.95	26.5	17/02	0.40	02/08	1.8	0.60	0.45
				1998	1191	118	416	156	1.71	52.9	31/10	0.42	23/09	3.7	0.94	0.47
				1999	1271	126	544	204	2.24	61.8	19/01	0.44	31/07	5.1	1.23	0.48
				2000	1380	137	625	234	2.56	**75.9**	**29/10**	0.45	31/07	5.3	1.56	0.50
053026	**Frome (Bristol) at Frampton Cotterell**		C.A: 78.5 km^2	**78-95**	**819**		**405**		**1.01**	**21.0**	**27/12 1979**	**0.03**	**11/08 1990**	**2.5**	**0.45**	**0.10**
M.A: EA	Local No: 530240	Sens.: 38.3	S/full: 48.0m^3s^{-1}													
F.A.R: N	Level: 43m	UE:	FAI:													
Comment: Crump profile weir, crest 7.5m broad. Full range structure, but drowns out at high flows. # Geology: mainly Coal Measures E of R. Frome and Lias to W. Responsive catchment, however detention lakes 4 to 6km u/s may truncate peaks. Land use: predominantly rural.				1996	702	86	347	86	0.86	7.6	25/03	0.17	03/08	2.0	0.58	0.19
				1997	822	100	330	81	0.82	8.2	13/02	0.07	18/08	1.8	0.42	0.14
				1998	952	116	479	118	1.19	12.9	07/03	0.09	03/09	3.0	0.45	0.13
				1999	1071	131	697	172	1.74	**23.3**	**20/01**	0.10	14/09	3.6	0.65	0.15
				2000	1114	136	638	158	1.58	22.3	30/10	0.10	31/07	3.8	0.75	0.12
053006	**Frome(Bristol) at Frenchay**		C.A: 148.9 km^2	**61..95**	*804*		**356**		**1.68**	**70.8**	**10/07 1968**	**0.08**	**10/08 1976**	**4.1**	**0.74**	**0.19**
M.A: EA	Local No: 530270	Sens.: 7.9	S/full: 56.0m^3s^{-1}													
F.A.R: N	Level: 20m	UE: .07	FAI: 0.995													
Comment: Trapezoidal critical depth flume. Full range station. Flume designed on basis of pre-urbanisation flow estimates - site swamped in storms of 1965 and 1968. Extra retaining walls have been installed. # Complex geology; eastern and central catchment dominated by sandstones of the Coal Measures and Mercia Mudstone. West is less permeable; Mercia Mdst and Liassic clays. Superficial deposits are meltwater gravels and terraces, mainly in west.				1996	701	87	283	79	1.33	15.3	19/11	0.14	25/07	3.1	0.83	0.19
				1997	823	102	297	83	1.40	15.4	12/02	0.22	23/07	3.2	0.58	0.26
				1998	951	118	447	126	2.11	33.4	06/03	0.17	12/08	5.0	0.84	0.24
				1999	1063	132	524	147	2.47	37.2	19/01	0.22	28/07	6.1	1.07	0.27
				2000	1103	137	*560*	157	2.64					6.7	1.28	0.24
054088	**Little Avon at Berkeley Kennels**		C.A: 134.0 km^2	**78..95**	**823**		**248**		**1.05**	**44.6**	**01/05 1983**	**0.12**	**28/07 1990**	**2.1**	**0.69**	**0.23**
M.A: EA	Local No: 542350	Sens.: 18.0														
F.A.R: PGEI	Level: m	UE: .01	FAI: 0.987													
Comment: VA station in rectangular concrete channel; gauged from road bridge. Flood gates d/s to cope with coincidence of large tidal range of R. Severn and extreme events. Moderate influence from PWS abstractions and spray irrigation. August 1998 dmfs under investigation, treat with extreme caution. Levels and rating dubious at this station. # Steep headwaters drain complex sequence of limestones, sandstones and clays of Lower and Middle Jurassic; flat Vale of Berkeley is floored by Cambrian inlier, Keuper Marl and Lias clays. Agricultural catchment, quite responsive.				1996	688	84	196	79	0.83	13.2	19/11	0.15	19/08	1.7	0.57	0.18
				1997	805	98	180	73	0.76	*9.8*	*12/02*	0.12	05/10	1.6	0.40	0.19
				1998	947	115	263	106	1.12	30.9	24/10	**0.11**	**10/08**	2.6	0.53	0.13
				1999	1073	130	335	135	1.42	**47.9**	**20/01**	0.16	27/07	2.9	0.86	0.24
				2000	1121	136	452	182	1.91	**76.4**	**29/10**	0.18	13/09	3.4	1.11	0.23

Map 10: WELSH/RHANBARTH CYMRU



Area: 21,262 km^2

Average Rainfall (1961–90): 1313 mm

Gauging Station Register

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
055034	Cyff	Cyff flume	SN 824842	3.1	FL	1973..99	2562	2167	395	**4039**	**99**	1282	76	0.21	0.01	08/76	5.6	.30	0.5	0.02
055008	Wye	Cefn Brwyn	SN 829838	10.6	CC	1951..00	2487	2182	305	5587	69	1372	76	0.73	0.05	08/76	18.1	.31	1.7	0.07
055035	Iago	Iago flume	SN 826854	1.1	FL	1973..99	2566	1949	617	**2724**	**98**	**1061**	76	0.07	>0.00	08/76	1.9	.31	0.2	0.01
055033	Wye	Gwy flume	SN 824853	3.9	FL	1973..99	2714	2224	490	**3000**	**98**	1399	76	0.28	0.01	08/76	8.5	.35	0.6	0.04
055010 *	Wye	Pant Mawr	SN 843825	27.2	FVVA	1955..82	2365	1927	438	2439	74	1351	76	1.66	0.10	08/76	51.8	.31	3.9	0.17
055005 *	Wye	Rhayader	SN 969676	166.8	VA	1937..69	1627	1169	458	1613	54	909	45	6.18	0.29	09/59	115.0	.37	14.9	0.63
055026	Wye	Ddol Farm	SN 976676	174.0	FVVA	1937..00	1651	1212	439	**1918**	**00**	780	76	6.69	0.18	08/76	116.3	.37	16.1	0.55
055030 *	Claerwen	Dol-y-mynach	SN 910620	95.3	TP	1926..50		1327		1648	30	847	33	4.01	0.21	07/49	90.9	.30	10.2	0.33
055006 *	Elan	Caban Coch Res	SN 926645	184.0	B	1908..84	1825	866	959	1563	23	239	76	5.05	0.58	10/84		.34	13.7	1.40
055032	Elan	Elan Village	SN 934653	184.0	FV	1908..00	1843	883	960	1563	23	239	76	5.15	0.56	10/84		.34	14.0	0.83
055011 *	Ithon	Llandewi	SO 105683	111.4	VA	1959..82	1188	741	447	996	60	480	64	2.62	0.03	08/76	54.9	.39	6.4	0.14
055016	Ithon	Disserth	SO 024578	358.0	FV	1968..00	1123	717	406	**960**	**00**	444	71	8.14	0.09	08/76	104.2	.38	21.1	0.32
055017 *	Chwefru	Carreg-y-wen	SN 998531	29.0	FVVA	1968..82	1426	980	446	1410	81	661	76	0.90	0.01	08/76	20.5	.34	2.2	0.04
055004 *	Irfon	Abernant	SN 892460	72.8	VA	1937..82	1815	1463	352	1917	66	927	76	3.38	0.14	05/80	55.3	.37	7.6	0.31
055012	Irfon	Cilmery	SN 995507	244.2	FVVA	1966..00	1704	1321	383	**2074**	**98**	795	76	10.23	0.25	08/76	202.8	.36	25.0	0.68
055007	Wye	Erwood	SO 076445	1282.1	VA	1937..00	1411	914	497	**1400**	**00**	536	64	37.16	2.62	08/76	556.7	.41	93.0	4.49
055025	Llynfi	Three Cocks	SO 166373	132.0	VA	1970–00	1011	547	464	**864**	**00**	283	73	2.29	0.07	08/76	48.0	.57	5.5	0.16
055002	Wye	Belmont	SO 485388	1895.9	VA	1935..00	1250	788	462	**1284**	**00**	453	76	47.37	3.34	08/76	421.0	.46	113.6	6.14
055031	Yazor Brook	Three Elms	SO 492415	42.3	FV	1973..00	707	174	533	320	94	82	76	0.23	0.02	09/89		.55	0.4	0.04
055014	Lugg	Byton	SO 364647	203.3	FV	1966–00	1048	624	424	**877**	**00**	360	73	4.02	0.41	08/76	27.5	.65	9.0	0.66
055020	Pinsley Brook	Cholstrey Mill	SO 462598	24.2	VA	1993–00	812	624	188	731	00	360	97	0.48	0.17	09/96		.78	0.8	0.19
055021	Lugg	Butts Bridge	SO 502589	371.0	VA	1969..00	927	478	449	**776**	**00**	263	73	5.62	0.51	08/76	37.4	.70	12.0	0.99
055013	Arrow	Titley Mill	SO 328585	126.4	VA	1966..00	1028	602	426	853	82	327	73	2.41	0.11	08/95	36.4	.55	5.6	0.26
055003	Lugg	Lugwardine	SO 548405	885.8	VA	1939..00	850	394	456	691	60	175	64	11.07	0.57	08/76	51.7	.63	26.1	1.48
055028	Frome	Bishops Frome	SO 667489	77.7	FV	1971..00	741	284	457	470	81	**130**	**97**	0.70	>0.00	10/99		.48	1.5	0.06
055018	Frome	Yarkhill	SO 615428	144.0	VA	1968..00	732	261	471	**406**	**00**	147	73	1.19	0.06	08/76	21.7	.52	2.6	0.15
055027 *	Rudhall Brk	Sandford Bridge	SO 641257	13.2	FV	1971..98	734	315	419	**468**	**98**	100	73	0.13	0.01	08/76		.73	0.3	0.01
055036	Garren	Marstow Mill	SO 561194	91.0	US	1997..00	912	387	525	549	00	206	97	1.12	0.19	09/97		.66	2.7	0.17
055015 *	Honddu	Tafolog	SO 277294	25.1	FVVA	1966..82	1402	898	504	1092	72	513	73	0.71	0.04	05/82	17.3	.54	1.5	0.11
055029	Monnow	Grosmont	SO 415249	354.0	VA	1948..00	1011	538	473	971	60	244	73	6.04	0.36	08/76	131.4	.51	13.9	0.67
055009 *	Monnow	Kentchurch	SO 419251	357.4	VA	1948..72	1028	521	507	962	60	274	64	5.90	0.60	09/61	112.6	.50	12.9	0.77
055022 *	Trothy	Mitchel Troy	SO 503112	142.0	FVVA	1969..82	870	351	519	458	74	129	73	1.58	0.08	07/76	36.2	.49	3.5	0.12
055023	Wye	Redbrook	SO 528110	4010.0	VA	1936–00	1038	582	456	**976**	**00**	314	64	74.06	5.18	08/76	512.6	.54	174.5	11.54
056008 *	Monks Ditch	Llanwern	ST 372885	15.4	FL	1970..76	923	432	491	514	71	252	73	0.21	0.05	10/72		.59	0.4	0.05
056014	Usk	Usk Reservoir	SN 840290	17.0	C	1979..00	1781	746	1035	**1054**	**00**	**224**	**96**	0.40	**0.06**	**08/96**		.49	1.0	0.07
056007	Senni	Pont Hen Hafod	SN 928255	19.9	C	1967..00	1980	1637	343	**2482**	**98**	930	73	1.03	0.06	08/95	26.2	.37	2.4	0.10
056006 *	Usk	Trallong	SN 947295	183.8	VA	1963–84	1686	1119	567	1598	74	692	73	6.52	0.98	05/80	164.3	.44	14.7	1.00
056013	Yscir	Pontaryscir	SO 003304	62.8	C	1972–00	1437	1004	433	**1516**	**00**	646	73	2.00	0.10	08/76	31.5	.46	4.8	0.19
056003 *	Honddu	The Forge Brecon	SO 051297	62.1	CC	1963–84	1168	751	417	1050	74	446	64	1.48	0.06	08/76	23.5	.52	3.4	0.16
056004 *	Usk	Llandetty	SO 127203	543.9	VA	1965..81	1501	1045	456	1359	74	589	73	18.03	1.62	08/76	340.1	.49	38.5	2.35
056012	Grwyne	Millbrook	SO 241176	82.2	C	1971..00	1275	787	488	**1074**	**00**	431	73	2.05	0.20	08/95	19.9	.59	4.7	0.34
056001	Usk	Chain Bridge	SO 345056	911.7	VA	1957..00	1406	980	426	1524	60	515	73	28.34	2.70	08/76	379.7	.52	64.6	4.11
056015	Olway Brook	Olway Inn	SO 384010	105.1	C	1975–00	992	465	527	**830**	**00**	280	75	1.55	0.05	08/90	17.9	.46	3.8	0.11
056005 *	Lwyd	Ponthir	ST 330924	98.1	CC	1966–98	1446	1010	436	1358	94	513	73	3.14	0.47	07/76	48.8	.56	6.9	0.64
056011 *	Sirhowy	Wattsville	ST 206912	76.1	FVVA	1970..83	1492	875	617	1092	81	457	73	2.11	0.20	08/76	30.3	.50	4.7	0.34
056002	Ebbw	Rhiwderyn	ST 259889	216.5	FVVA	1957..00	1524	1078	446	1541	82	509	73	7.40	**0.00**	**12/96**	90.9	.57	16.8	1.43
057008	Rhymney	Llanedeyrn	ST 225821	178.7	FVVA	1973–00	1468	997	471	**1505**	**00**	512	73	5.65	0.45	08/95	103.4	.48	13.1	0.73
057011 *	Taf Fawr	Beacons Res	SN 987193	5.1	TP	1976..80	2167			2387	77	1886	78	4.52	0.03	08/76		.32	0.8	0.03
057001 *	Taf Fechan	Taf Fechan Res	SO 060117	33.7	MIS	1936..73	1976	2331				271	64	2.49	0.10	12/73		.80	2.3	0.22
057012 *	Garwnant	Llwynon Res	SO 004129	4.3	TP	1976–80	1761					1471	78	2.24	0.01	08/76		.70	0.8	
057002 *	Taf Fawr	Llwynon Res	SO 012111	43.0	MIS	1931..73	1992	937	1055	1459	54	399	73	1.28	0.11	05/56		.30	3.2	0.14
057015	Taff	Merthyr Tydfil	SO 043068	104.1	FVVA	1978–00	2014	1093	921	**1662**	**00**	**753**	**96**	3.61	0.34	08/84	91.9	.38	8.7	0.75
057007	Taff	Fiddlers Elbow	ST 089951	194.5	FVVA	1973–00	1780	1098	682	**1618**	**00**	690	76	6.77	0.79	08/76	123.1	.46	16.0	1.28
057004	Cynon	Abercynon	ST 079956	106.0	FVVA	1957..00	1851	1285	566	**1764**	**00**	644	73	4.32	0.35	08/95	72.7	.40	10.8	0.54
057006	Rhondda	Trehafod	ST 054909	100.5	VA	1970..00	2306	1820	486	**2794**	**00**	1045	73	5.80	0.39	07/84	99.8	.41	13.9	0.75
057005	Taff	Pontypridd	ST 079897	454.8	FVVA	1970..00	1920	1377	543	**2107**	**00**	713	73	19.86	2.29	08/76	288.9	.47	43.5	3.59
057003 *	Taff	Tongwynlais	ST 132818	486.9	VA	1965–72	1863	1365	498	1570	67	989	69	21.08	4.36	08/68	320.0	.44	48.4	4.03
057010	Ely	Lanelay	ST 034827	39.4	VA	1974..00	1704	1224	480	**1795**	**00**	760	75	1.53	0.12	08/76	43.0	.44	3.6	0.17
057009	Ely	St Fagans	ST 121770	145.0	FVVA	1975–00	1422	999	423	**1509**	**00**	591	75	4.59	0.46	08/76	52.2	.48	10.6	0.58
058011	Thaw	Gigman Bridge	ST 017716	49.2	MIS	1976..00	1206	672	534	**1295**	**00**	448	90	1.05	0.09	08/84	6.2	.68	2.4	0.15
058009	Ewenny	Keepers Lodge	SS 920782	62.5	FVVA	1971–00	1394	951	443	1444	94	523	73	1.88	0.22	08/76	44.3	.56	4.0	0.38
058003 *	Ewenny	Ewenny Priory	SS 914780	62.9	VA	1962–65	1185	802	383	787	63	553	64	1.60	0.26	09/64	19.6	.49	2.9	0.26
058005	Ogmore	Brynmenyn	SS 904844	74.3	FVVA	1970..00	2011	1609	402	**2502**	**00**	985	76	3.79	0.28	07/84	48.4	.49	8.5	0.54
058007	Llynfi	Coytrahen	SS 891855	50.2	FVVA	1970–00	1856	1456	400	**2235**	**98**	908	73	2.32	0.24	07/84	43.8	.48	5.2	0.36
058001	Ogmore	Bridgend	SS 904794	158.0	FVVA	1963..00	1800	1328	472	**2043**	**98**	790	73	6.65	0.52	07/84	103.1	.48	14.7	0.97
058012	Afan	Marcroft Weir	SS 771910	87.8	CC	1978..00	2166	1873	293	**2584**	**98**	1469	78	5.22	0.55	08/95		.45	11.9	0.84
058010	Hepste	Esgair Carnau	SN 969134	11.0	FVVA	1975..00	2168	1720	448	**2557**	**98**	1081	76	0.60	0.03	08/95	12.8	.21	1.7	0.04
058006	Mellte	Pontneddfechan	SN 915082	65.8	FVVA	1971..00	2083	1547	536	**2300**	**00**	951	73	3.23	0.21	08/84	59.2	.38	7.8	0.36
058002	Neath	Resolven	SN 815017	190.9	FVVA	1962..00	2041	1458	583	**2381**	**00**	182	64	8.83	0.26	09/64	172.7	.35	23.0	0.66
058008	Dulais	Cilfrew	SN 778008	43.0	CC	1971..00	1825	1465	360	**2161**	**00**	904	76	2.00	0.14	08/95	44.1	.39	4.9	0.25
059001	Tawe	Ynystanglws	SS 685998	227.7	VA	1957..00	1928	1677	251	2411	86	1054	76	12.11	0.57	09/59	225.3	.37	29.3	1.46
059002	Loughor	Tir-y-dail	SN 623127	46.4	VA	1967..00	1570	1412	158	**2188**	**00**	833	76	2.08	0.20	08/84	68.7	.44	4.8	0.33
060008	Tywi	Ystradffin	SN 786472	89.8	C	1983–00	1895	1474	421	**2034**	**00**	**1031**	**96**	4.20	**0.83**	**01/96**		.58	8.6	0.97
060007	Tywi	Dolau Hirion	SN 762362	231.8	VA	1968..00	1748	1360	388	**2168**	**00**	**494**	**96**	9.99	0.34	08/95	119.0	.44	22.9	2.06
060005	Bran	Llandovery	SN 771343	66.8	MIS	1968..00	1547	1095	452	**1753**	**98**	660	76	2.32	0.03	08/76	38.3	.38	5.6	0.13
060009	Sawdde	Felin-y-cwm	SN 712266	77.5	FV	1970..00	1794	1353	441	1969	74	823	73	3.32	0.26	08/76	97.2	.40	7.5	0.39
060012	Twrch	Ddol Las	SN 650440	20.7	VA	1970..00	1657	1068	589	**1665**	**00**	**699**	**96**	0.70	0.00	09/90	14.7	.33	1.8	0.04
060013 *	Cothi	Pt Ynys Brechfa	SN 537301	261.6	VA	1971–76	1494	984	510	1425	74	644	73	8.16	0.62	08/75	120.4	.45	20.2	0.71
060002	Cothi	Felin Mynachdy	SN 508225	297.8	VA	1961–00	1663	1211	452	**1768**	**00**	760	73	11.44	0.36	08/76	154.1	.44	26.8	0.97

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
060010	Tywi	Nantgaredig	SN 485206	1090.4	FVVA	1958..00	1595	1136	459	**1682**	**00**	651	76	39.27	1.52	09/59	312.8	.46	92.4	4.02
060006	Gwili	Glangwili	SN 431220	129.5	VA	1968–00	1656	1219	437	**1938**	**00**	671	73	5.01	0.21	08/95	82.4	.47	11.7	0.44
060003	Taf	Clog-y-Fran	SN 238160	217.3	VA	1965..00	1441	1089	352	**1555**	**00**	678	73	7.50	0.33	08/95	73.6	.56	16.9	0.78
060004	Dewi Fawr	Glasfryn Ford	SN 290175	36.7	VA	1969..00	1524	1111	413	**1619**	**98**	635	73	1.29	0.00	03/92	17.2	.54	3.1	0.12
061002	East Cleddau	Canaston Bridge	SN 072153	183.1	VA	1960..00	1459	1048	411	1430	86	693	73	6.09	0.81	07/62	80.3	.55	13.3	1.03
061001	West Cleddau	Prendergast Mill	SM 954177	197.6	VA	1965..00	1309	861	448	**1238**	**00**	580	73	5.40	0.37	08/76	53.5	.63	12.1	0.72
061003	Gwaun	Clrhedyn Bridge	SN 005349	31.3	VA	1969..00	1567	1155	412	**1685**	**00**	808	73	1.15	0.07	08/76	15.4	.60	2.5	0.17
062002 *	Teifi	Llanfair	SN 433406	510.0	VA	1971..82	1406	996	410	1367	74	641	76	16.10	0.63	08/76	132.0	.49	37.7	1.64
062001	Teifi	Glan Teifi	SN 244416	893.6	VA	1959–00	1377	1017	360	**1517**	**00**	666	64	28.82	1.07	09/59	190.1	.54	65.8	3.13
063003	Wyre	Llanrhystyd	SN 542698	40.6	VA	1970..00	1188	822	366	**1160**	**00**	597	75	1.06	0.04	07/76	26.0	.41	2.7	0.06
063004	Ystwyth	Cwm Ystwyth	SN 791737	32.1	FV	1984–00	2133	1953	180	**2748**	**00**	1480	95	1.99	0.08	08/95		.30	5.0	0.19
063001	Ystwyth	Pont Llolwyn	SN 591774	169.6	VA	1963..00	1514	1122	392	**1752**	**00**	703	76	6.03	0.18	08/76	90.3	.41	14.3	0.58
063002	Rheidol	Llanbadarn Fawr	SN 601804	182.1	VA	1965..00	1823	1831				1079	76	10.57	1.02	07/84	78.0	.49	20.0	1.97
064006	Leri	Dolybont	SN 635882	47.2	C	1960–00	1530	846	684	**1583**	**00**	165	69	1.27	0.03	06/70	16.8	.49	3.1	0.05
064004	Twymyn	Cemmaes Road	SH 825047	111.4	VA	1995–00	1645	1187	458	1616	00	893	97	4.20	0.21	08/95		.37	10.3	0.31
064001	Dyfi	Dyfi Bridge	SH 745019	471.3	VA	1962..00	1908	1550	358	**2362**	**00**	964	76	23.16	0.66	08/76	316.6	.39	54.9	2.09
064002	Dysynni	Pont-y-Garth	SH 632066	75.1	VA	1966..00	2182	1894	288	**2512**	**98**	1193	76	4.51	0.28	07/84	63.0	.48	9.7	0.62
064010	Afon Mawddach	Tyddyn Gwladys	SH 735264	63.1	VA	1994–00	2144	2069	75	2461	98	1306	95	4.14	0.15	08/95		.21	9.9	0.17
064003 *	Mawddach	Gantlwyd	SH 729233	138.6	VA	1967..74	2020	1266	754					5.57	0.94	07/69		.32	9.4	0.81
065001	Glaslyn	Beddgelert	SH 592478	68.6	VA	1961..00	3070	2654	416	**4190**	**00**	1925	68	5.77	0.31	08/76	93.8	.33	13.5	0.58
065014	Colwyn	Hafod Wydr	SH 575504	6.6	C	1995–00	3072	2655	417	3441	00	2056	96	0.55	0.04	08/95		.25	1.5	0.05
065007	Dwyfawr	Garndolbenmaen	SH 500429	52.4	CC	1975–00	2076	1548	528	**2337**	**00**	1097	76	2.57	0.10	07/84	33.8	.39	5.9	0.29
065005	Erch	Pencaenewydd	SH 400404	18.1	C	1973–00	1430	1061	369	**1721**	**00**	749	73	0.61	0.06	08/76	11.0	.55	1.3	0.10
065015	Llyfni	Pont Y Cim	SH 441523	48.1	C	1995–00	2026	1424	602	1933	00	1239	96	2.17	0.38	08/95		.59	4.8	0.65
065004	Gwyrfai	Bontnewydd	SH 484599	47.9	C	1970..00	2226	1499	727	**2040**	**00**	**978**	**96**	2.28	0.14	08/76	20.5	.43	5.2	0.30
065008	Nant Peris	Tan-Yr-Alt	SH 608579	12.2	VA	1982–00	3537	3174	363	**4601**	**00**	**2326**	**96**	1.23	0.07	08/95		.23	3.1	0.09
065006	Seiont	Peblig Mill	SH 493623	74.4	VA	1976..00	2366	2027	339	**2980**	**00**	**1539**	**96**	4.78	0.41	08/95	40.6	.41	10.9	0.67
065002 *	Dwyryd	Maentwrog	SH 670415	78.2	VA	1967..77	2220	1968	252					4.88	0.30	08/76	143.1	.35		
066012	Lledr	Gethins Bridge	SH 785538	72.8	VA	1995..00	2572	2107	465	2811	00	1529	96	4.86	0.13	08/95		.26	13.2	0.34
066011	Conwy	Cwm Llanerch	SH 802581	344.5	VA	1964..00	2199	1714	485	**2609**	**00**	1216	71	18.72	0.65	07/84	367.2	.28	45.7	1.30
066005	Clwyd	Ruthin Weir	SJ 122592	95.3	MIS	1971..00	987	464	523	**793**	**00**	286	75	1.40	0.01	08/76	10.2	.57	3.6	0.07
066004	Wheeler	Bodfari	SJ 105714	62.9	C	1970..00	878	379	499	**649**	**00**	251	91	0.75	0.19	08/76	3.2	.82	1.4	0.25
066025	Clwyd	Pont Dafydd	SJ 044749	430.8	FL	1995..00	1013	494	519	755	98	324	96	6.74	0.62	08/95		.54	16.7	0.72
066001	Clwyd	Pont-y-Cambwll	SJ 069709	404.0	VA	1959–00	938	491	447	**846**	**00**	225	64	6.29	0.51	08/76	44.3	.60	14.5	0.96
066003 *	Aled	Bryn Aled	SH 957703	70.0	CC	1963..95	1188	630	558	766	81	383	64	1.40	0.09	09/89	27.8	.49	3.5	0.18
066006	Elwy	Pont-y-Gwyddel	SH 952718	194.0	VA	1973–00	1224	690	534	**1094**	**00**	**447**	**96**	4.24	0.24	08/84	63.2	.45	10.9	0.33
066002 *	Elwy	Pant yr Onen	SJ 021704	220.0	VA	1961–74	1119	642	477	777	67	393	64	4.48	0.33	07/62	66.6	.45	10.1	0.45
067018	Dee	New Inn	SH 874308	53.9	VA	1969–00	1985	1818	167	**2742**	**99**	1250	76	3.11	0.09	08/76	72.4	.28	8.0	0.23
067010	Gelyn	Cynefail	SH 843420	13.1	CC	1966..00	2180	1651	529	**2412**	**00**	1172	76	0.69	0.03	08/76	15.9	.27	1.8	0.07
067011 *	Aberderfel	Nant Aberderfel	SH 851392	3.7	CB	1967..81	2008	835	1173	1602	67	324	75	0.10	>0.00	08/76		.13	0.2	>0.00
067017	Tryweryn	Llyn Celyn O/f	SH 880399	59.9	CB	1969–00	2139	1931	208	**2944**	**00**	**973**	**96**	3.67	0.35	11/76		.42	9.1	0.38
067001	Dee	Bala	SH 942357	261.6	MIS	1957–00	1868	1566	322	**2475**	**00**	**1077**	**96**	12.99	1.06	06/61		.51	29.9	2.46
067013 *	Hirnant	Plas Rhiwedog	SH 946349	33.9	VA	1967..76	1709	1152	557	1405	74	742	76	1.24	0.04	08/76	24.3	.41	2.8	0.10
067028	Ceidiog	Llandrillo	SJ 034371	36.5	VA	1978..00	1553	1232	321	**1870**	**00**	963	95	1.43	0.09	08/90		.46	3.5	0.12
067029 *	Trystion	Pen-y-felin Fawr	SJ 066405	12.3	TP	1977..86	1308	826	482	887	79	836	78	0.32	0.01	08/83		.44	0.8	0.03
067003 *	Brenig	Llyn Brenig O/f	SH 974539	20.2	TP	1922–96	1318	868	450	1764	84	169	77	0.56	0.03	09/59	14.8	.42	1.4	0.06
067006	Alwen	Druid	SJ 042436	184.7	VA	1960–00	1332	862	470	**1307**	**00**	581	64	5.05	0.39	08/76	72.4	.48	11.6	0.68
067007 *	Dee	Glyndyfrdwy	SJ 155428	728.0	VA	1964–69	1563	1070	493	1208	67	1088	68	24.70	4.74	06/64	182.0	.50	57.8	6.07
067005	Celriog	Brynkinalt Weir	SJ 295373	113.7	CB	1956..00	1276	853	423	1276	60	470	64	3.08	0.18	08/76	30.5	.55	7.1	0.43
067015	Dee	Manley Hall	SJ 348415	1019.3	CC	1937–00	1414	963	451	**1418**	**00**	633	64	31.14	3.05	09/49	217.1	.52	71.3	5.74
067002 *	Dee	Erbistock	SJ 357413	1040.0	VA	1932–70	1406	937	469	1352	54	586	33	30.90	2.15	08/37	249.7	.50	70.8	3.81
067025	Clywedog	Bowling Bank	SJ 396483	98.6	C	1976–00	875	435	440	**590**	**00**	**289**	**96**	1.36	0.23	08/95	19.9	.59	2.8	0.35
067009	Alyn	Rhydymwyn	SJ 206667	77.8	FL	1965..00	999	288	711	**495**	**00**	36	68	0.71	**0.00**	**08/99**	8.4	.35	2.0	
067008	Alyn	Pont-y-Capel	SJ 336541	227.1	CC	1965–00	932	335	597	**558**	**00**	176	75	2.41	0.29	08/76	23.4	.57	5.7	0.47
067027	Dee	Ironbridge	SJ 418600	1674.1	US	1993..00	1242	745	497	1016	00	485	96	39.56	10.15	07/99		.56	96.0	9.68
067026 *	Dee	Eccleston Ferry	SJ 415612	1816.8	S	1974–86	1128	663	465	794	74	451	75	38.19	8.22	08/76		.60	89.7	10.24
067033	Dee	Chester Suspension Bridge	SJ 409659	1816.8	US	1994–00	1208	634	574	944	00	384	96	36.52	6.14	07/99		.50	97.8	5.23
067020 *	Dee	Chester Weir	SJ 408659	1816.8	VA	1984–98	1107	511	596	649	94	**432**	**96**	29.46	4.54	09/89	189.6	.50	78.3	3.70
102001	Cefni	Bodffordd	SH 429769	22.3	CB	1988–00	1069	571	498	**1044**	**00**	365	91	0.40	>0.00	08/90		.51	1.0	0.02

Hydrometric Statistics

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
055034	**Cyff at Cyff flume** C.A: 3.1 km^2	**73..95**	**2553**		**2075**		**0.20**	**6.4**	**27/01 1995**	**0.01**	**01/09 1976**	**0.5**	**0.10**	**0.02**
M.A: CEH	Local No: 107 Sens.:	1996	2072	81	*1691*	81	0.17					0.4	0.08	0.02
F.A.R: N	Level: 356m UE: <.01 FAI: 1.000	1997	2143	84	1761	85	0.17	5.2	09/12	0.02	22/04	0.4	0.09	0.02
Comment: Rectangular, side contracted critical depth flume designed by Hydraulics Research Ltd, suitable for streams with steep gradients, heavy sediment loads and high flood/drought flow ratios. Shoal formation common, requiring prompt removal to avoid drowning. Gauged by Braystoke c/m and volumetric check gauging at low flows. Natural, CEH research catchment nested within 55008. Primary 15 minute dataset available. # Drains Plynlimon upland massif: composed of Ordovician grits, shales and slates and Silurian mudstones, mostly covered by peaty soils. Vegetation: mainly natural or partly reseeded grassland, supporting sheep grazing.		1998	3216	126	2781	134	0.27	6.1	27/10	0.02	25/05	0.6	0.15	0.03
		1999	2998	117	2400	116	0.24	6.0	01/03	0.01	01/08	0.5	0.11	0.03
		2000	3330	130	2945	142	0.29	5.6	02/03	0.02	15/05	0.7	0.16	0.05
055008	**Wye at Cefn Brwyn** C.A: 10.6 km^2	**51..95**	*2450*		**2164**		**0.72**	**48.9**	**05/08 1973**	**0.02**	**11/06 1963**	**1.7**	**0.36**	**0.07**
M.A: CEH	Local No: 55008 Sens.: 15.7 S/full: 66.0m^3s^{-1}	1996	2129	87	1644	76	0.55	21.1	31/10	0.05	23/09	1.4	0.26	0.07
F.A.R: N	Level: 341m UE: <.01 FAI: 1.000	1997	2207	90	1725	80	0.58	16.6	09/12	0.06	22/04	1.2	0.31	0.08
Comment: 3-bay Crump profile weir (no divide piers), divide plates installed 1962; concrete piers built 1969, low crest 2.43m broad, high crests total 9.13m broad. Very steep channel, u/s accretion needs regular clearing. Treat early record with care. Natural regime. Operated as an IH (now CEH Wallingford) experimental basin since 1968 (15 minute flow data plus extensive hydrometeorological database resides at CEH). 11/9 - 8/10/97 dmfs est. from subcatchment whilst repairs to structure. # Small, high relief, very wet (>2000mm) catchment, grassland on peat overlying weather resistant Silurian slates and shales. Very responsive.		1998	3315	135	2883	133	0.96	25.1	27/10	0.08	31/05	2.1	0.53	0.14
		1999	3069	125	2475	114	0.83	22.4	28/02	0.05	01/08	2.0	0.40	0.09
		2000	3391	138	2953	136	0.99	17.9	03/03	0.09	30/07	2.5	0.56	0.12
055035	**Iago at Iago flume** C.A: 1.1 km^2	**73..95**	**2544**		**1921**		**0.07**	**8.9**	**14/11 1991**	**>0.00**	**03/09 1976**	**0.2**	**0.03**	**0.01**
M.A: CEH	Local No: 109 Sens.:	1996	2145	84	1690	88	0.06	1.7	31/10	0.02	25/06	0.1	0.03	0.02
F.A.R: N	Level: m UE: <.01 FAI: 1.000	1997	2209	87	1762	92	0.06	1.6	03/02	0.02	07/06	0.1	0.03	0.02
Comment: Rectangular, side contracted critical depth flume designed by Hydraulics Research Ltd, suitable for streams with steep gradients, heavy sediment loads and high flood/drought flow ratios. Shoal formation common, requiring prompt removal to avoid drowning. Gauged by Braystoke c/m and volumetric check gauging at low flows. Natural, CEH research catchment nested within 55008. Primary 15 minute dataset available. Discontinued from 7/6/99. # Drains Plynlimon upland massif: composed of Ordovician grits, shales and slates and Silurian mudstones. Vegetation: heath on peaty plateau; grassland on free draining slopes (supporting sheep grazing) and mires in valley bottoms.		1998	3354	132	2719	142	0.09	2.7	27/10	0.03	04/12	0.2	0.04	0.03
		1999	3081	121										
		2000	3393	133										
055033	**Wye at Gwy flume** C.A: 3.9 km^2	**73..95**	**2692**		**2208**		**0.27**	**10.4**	**06/10 1980**	**0.01**	**21/08 1976**	**0.6**	**0.14**	**0.04**
M.A: CEH	Local No: 105 Sens.:	1996	2252	84	1816	82	0.22	10.0	31/10	0.03	23/09	0.5	0.12	0.03
F.A.R: N	Level: m UE: <.01 FAI: 1.000	1997	2370	88	1861	84	0.23	7.1	09/12	0.03	22/04	0.5	0.13	0.04
Comment: Rectangular, side contracted critical depth flume designed by Hydraulics Research Ltd, suitable for streams with steep gradients, heavy sediment loads and high flood/drought flow ratios. Shoal formation common, requiring prompt removal to avoid drowning. Gauged by Braystoke c/m and volumetric check gauging at low flows. Natural, CEH research catchment nested within 55008. Primary 15 minute dataset available. # Drains highest area of Plynlimon upland massif: composed of Ordovician massive grits (unconfined aquifer maintaining baseflow), slates and Silurian mudstones. Vegetation: heath on peaty plateau; grassland on free draining slopes (supporting sheep grazing) and mires in valley bottoms.		1998	3510	130	2997	136	0.37	9.9	22/10	0.04	30/05	0.8	0.20	0.06
		1999	3239	120	2569	116	0.32	9.8	16/12	0.02	01/08	0.7	0.16	0.04
		2000	3566	132	3116	141	0.38	7.4	29/08	0.04	20/07	1.0	0.21	0.05
055026	**Wye at Ddol Farm** C.A: 174.0 km^2	**37..95**	**1630**		**1189**		**6.56**	**291.4d**	**21/12 1991**	**0.08**	**15/08 1983**	**15.8**	**3.52**	**0.54**
M.A: EA	Local No: 55026 Sens.: 10.4 B/full: 235.0m^3s^{-1}	1996	1440	88	1103	93	6.07	92.2	31/10	0.49	23/09	14.4	3.30	0.57
F.A.R: P	Level: 193m UE: <.01 FAI: 0.997	1997	1478	91	1082	91	5.97	79.6	10/12	0.58	19/08	14.2	2.89	0.93
Comment: Initially, gauged nearby at Rhayader (55005,1937-69); resited as velocity-area station with rock bar as control. Informal Flat V installed 1972. Bankfull width 30m. Cableway span 54m. All but exceptional floods contained. Lowest gauging station on Wye unaffected by large water supply res. (flows from Elan valley complex enter just d/s). # Wet, upland catchment draining impermeable, metamorphosed Silurian sediments. High relief, headwaters reach over 600m, and feature steep sided and high gradient streams. Moorland and forestry.		1998	2138	131	1714	144	9.46	196.0	06/03	0.43	31/05	21.5	5.11	1.23
		1999	2044	125	1618	136	8.93	191.7	01/03	0.15	01/08	22.1	4.10	0.34
		2000	2224	136	1923	162	10.58	151.5	30/10	0.84	30/07	26.8	6.37	1.26
055032	**Elan at Elan Village** C.A: 184.0 km^2	**08..95**	**1833**		**881**		**5.14**	**331.9**	**11/11 1970**	**0.50**	**24/10 1926**	**14.0**	**1.58**	**0.86**
M.A: EA	Local No: 55032 Sens.: 16.8 B/full: 7.0m^3s^{-1}	1996	1606	88	330	37	1.92	29.0	03/12	0.74	12/12	2.8	0.82	0.79
F.A.R: SRP	Level: 210m UE: FAI:	1997	1656	90	482	55	2.81	89.4	28/11	0.69	10/03	7.3	0.82	0.78
Comment: Flat V Crump profile weir 23m wide, 350m d/s of Caban dam; cableway spans 40m. Entirely regulated apart from overspill. 5 u/s reservoirs. Circa 4 m^3s^{-1} to EA-Midlands. Releases for compensation (1.5 m^3s^{-1}), regulation and freshets. Monthly naturalised flows available for certain periods from older station. # Very wet (>1800mm), high relief catchment draining predominantly Silurian shales and slates. Forestry and moorland.		1998	2286	125	1149	130	6.71	149.5	06/03	0.76	12/06	16.3	3.58	0.80
		1999	2290	125	1186	135	6.92	142.0	01/03	0.75	25/05	21.0	2.64	0.79
		2000	2458	134	1484	168	8.64	203.4	29/10	0.70	27/12	24.9	3.06	0.75
055016	**Ithon at Disserth** C.A: 358.0 km^2	**68..95**	**1098**		**705**		**8.01**	**148.2**	**09/01 1992**	**0.01**	**25/08 1995**	**21.0**	**3.97**	**0.30**
M.A: EA	Local No: 55016 Sens.: 20.3 B/full: 115.0m^3s^{-1}	1996	976	89	560	79	6.34	94.4	12/02	0.17	18/09	16.8	3.65	0.26
F.A.R: N	Level: 150m UE: <.01 FAI: 0.998	1997	994	91	552	78	6.27	81.6	19/02	0.34	19/08	15.6	2.70	0.74
Comment: Flat V Crump profile weir, 1:20 cross-slope, 18m wide, replaced velocty-area station with channel control in 1972. Cableway span 27.5m. Weir rebuilt Aug/Sep 1995. Missing data in 2001 due to access restrictions during Foot and Mouth outbreak. Suspect data arising from drift correction removed, from 19 Jul - 5 Aug 2001. Very high floods may inundate the rb. Natural flow regime. # Upper and western catchment drains Ordovician and Silurian shales; igneous complex in the SE. High moorland and extensive forestry plantations on the higher ground, mixed farming in valleys. Noticeably reduced rainfall compared to the u/s Wye and Irfon catchments.		1998	1380	126	948	134	10.76	171.2	27/10	1.09	31/08	26.0	4.48	1.39
		1999	1423	130	893	127	10.14	128.7	01/03	0.15	02/08	29.7	4.50	0.43
		2000	1494	136	962	136	10.89	167.6	30/10	0.54	25/08	26.2	5.78	0.85
055012	**Irfon at Cilmery** C.A: 244.2 km^2	**66..95**	**1673**		**1275**		**9.87**	**357.5**	**07/02 1990**	**0.14**	**15/08 1983**	**24.2**	**5.13**	**0.65**
M.A: EA	Local No: 55012 Sens.: 11.6 B/full: 185.0m^3s^{-1}	1996	1388	83	1072	84	8.28	164.4	28/10	0.50	23/09	19.9	4.51	0.61
F.A.R: N	Level: 136m UE: <.01 FAI: 0.998	1997	1540	92	1167	92	9.04	189.9	17/02	0.68	19/08	22.3	3.73	1.07
Comment: Velocity-area station, initially with a gravel shoal control, improved in 1979 by installing a 25m wide Crump profile Flat V weir. Weir rebuilt between 31/8/94 and 7/9/94, no data available. Cableway spans 44m. Above about 3m the rb floodplain is inundated. 1998 flood peak under review. Natural catchment. # Headwaters drain the very wet Tywi Forest area on indurated, Ordovician sediments. The middle and lower reaches are on relatively more permeable Silurian rocks. Responsive.		1998	2121	127	2074	163	16.06	**750.2**	**22/10**	1.09	31/05	33.9	6.67	1.95
		1999	2141	128	1801	141	13.94	301.0	01/03	0.31	01/08	33.1	6.16	0.64
		2000	2300	137	1833	144	14.15	219.5	29/10	0.99	30/08	34.3	8.53	1.46
055007	**Wye at Erwood** C.A: 1282.1 km^2	**37..95**	**1394**		**901**		**36.65**	**832.6**	**18/11 1986**	**1.41**	**29/08 1984**	**92.2**	**19.06**	**4.52**
M.A: EA	Local No: 55007 Sens.: 18.8 B/full: 650.0m^3s^{-1}	1996	1217	87	704	78	28.54	279.0	11/02	3.24	22/07	72.9	17.76	3.86
F.A.R: SPE	Level: 106m UE: <.01 FAI: 0.960	1997	1277	92	724	80	29.45	337.3	28/11	3.29	18/08	75.2	12.42	4.16
Comment: Velocity-area station with a massive rock bar as a control. Bankfull width approx. 64m, cableway span 81m. All but the highest flows contained. Substantial flow modification from regulation and abstraction from the Elan, PWS and sewage effluent. Some naturalised sequences available. # Large wet upland catchment draining metamorphosed Palaeozoic sediments and an igneous complex. Summit levels exceed 600m. Moorland, forestry and sheep grazing.		1998	1782	128	1276	142	51.87	**898.2**	**27/10**	4.66	01/06	121.9	26.73	6.71
		1999	1794	129	1215	135	49.39	723.3	01/03	3.77	11/07	127.4	25.43	4.41
		2000	1917	138	1404	156	56.93	854.6	30/10	4.54	25/08	141.0	34.84	5.54
055025	**Llynfi at Three Cocks** C.A: 132.0 km^2	**70..95**	**987**		**531**		**2.22**	**319.4**	**09/01 1992**	**0.04**	**26/08 1976**	**5.4**	**1.29**	**0.15**
M.A: EA	Local No: 55025 Sens.: 15.6 B/full: 30.0m^3s^{-1}	1996	837	85	390	73	1.63	*36.2*	*09/01*	0.06	18/09	3.5	1.11	0.09
F.A.R: N	Level: 88m UE: <.01 FAI: 0.951	1997	920	93	389	73	1.63	28.8	24/02	0.25	05/10	4.2	0.78	0.31
Comment: Velocity-area station with an informal broad-crested, asymmetrical Flat V weir enhancing the natural rock bar control. Cableway section formalised within the abutments of a former railway bridge. Natural catchment. # Headwaters drain the ORS of the Black Mountains; lower reaches expose ORS marls which have lower relief and support arable farming. Contains Llangorse Lake.		1998	1287	130	758	143	3.17	125.5	09/04	0.19	03/09	7.3	1.68	0.27
		1999	1225	124	768	145	3.22	59.4	23/12	0.22	01/08	7.8	2.11	0.35
		2000	1375	139	866	163	3.62	67.8	29/10	0.23	12/09	8.4	2.21	0.29

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
055002	**Wye at Belmont** C.A: 1895.9 km^2	**35..95**	**1237**		**773**		**46.48**	**1108.0**	**04/02**	**2.14**	**01/09**	**111.4**	**26.38**	**6.07**
M.A: EA	Local No: 55002 Sens.: 3.3 B/full: 522.0m^3s^{-1}								**1989**		**1984**			
F.A.R: S	Level: 46m UE: <.01 FAI: 0.968													
Comment: Channel control velocity-area station, width at bankfull approx. 49m; cableway span 62m. Embankment built on the left extends flood containment. Severe weed growth problems. Originally, stages taken from 1908 at Hereford, 1.2km d/s; flows were measured at current site. Prior to 1932, data unreliable. Moderate flow modification. Naturlised discharges take into account reservoirs in the Elan Valley. # Above Erwood (55007) are wet uplands draining Palaeozoic rocks; the lower third is a narrow corridor draining ORS marls and subordinate glacial gravels, which supports arable farming.		1996	1076	87	615	80	36.89	310.6	12/02	4.14	18/09	88.2	23.68	4.47
		1997	1142	92	653	84	39.25	362.1	29/11	6.20	20/08	95.2	18.29	8.24
		1998	1569	127	*1147*	148	68.98					167.8	35.58	14.86
		1999	1577	127	1124	145	67.56	469.9	03/03	7.64	02/08	172.6	34.25	9.04
		2000	1700	137	1288	167	77.22	551.5	31/10	10.12	06/09	186.4	47.61	13.98
055014	**Lugg at Byton** C.A: 203.3 km^2	**66..95**	**1029**		**613**		**3.95**	**54.3**	**14/01**	**0.35**	**24/08**	**8.8**	**2.60**	**0.66**
M.A: EA	Local No: 55014 Sens.: 9.1 B/full: 46.0m^3s^{-1}								**1968**		**1976**			
F.A.R: P	Level: 124m UE: <.01 FAI: 0.997													
Comment: Flat V Crump profile weir, 1:20 cross-slopes, 12.5m wide. Cableway span 21m. Before 1970 a stable riffle was the control. Above 2m left bank overtopped. Flow moderately modified by abstractions for PWS. # Headwaters drain Silurian rocks of the Radnor Forest. Impermeable bedrock is covered by extensive deposits of gravel in the valleys. This aquifer provides significant baseflow and moderates flood peaks. Mostly forestry and grazing.		1996	917	89	530	86	3.41	24.8	08/01	0.40	13/10	6.7	2.48	0.44
		1997	1000	97	452	74	2.91	22.3	28/11	0.67	05/10	6.8	1.62	0.81
		1998	1238	120	773	126	4.98	45.9	27/10	0.87	03/09	11.1	2.90	1.01
		1999	1309	127	812	132	5.23	29.2	25/12	0.59	15/09	12.5	3.37	0.69
		2000	1354	132	879	143	5.65	51.2	08/12	0.62	12/09	12.2	3.59	0.78
055021	**Lugg at Butts Bridge** C.A: 371.0 km^2	**69..95**	**910**		**470**		**5.53**	**64.1**	**10/01**	**0.44**	**15/08**	**12.1**	**3.66**	**0.93**
M.A: EA	Local No: 55021 Sens.: 11.1 B/full: 85.0m^3s^{-1}								**1986**		**1976**			
F.A.R: P	Level: 67m UE: <.01 FAI: 0.994													
Comment: Velocity-area station with rough stone control (at low flows). Station rebuilt in 1984; width at bankfull is 21m. # Headwaters drain Radnor Forest (developed on Silurian formations). Subdued relief in the lower valley (mostly Old Red Sandstone). Impervious catchment but extensive valley gravels provide some baseflow.		1996	802	88	388	83	4.56	22.2	09/01	1.13	20/10	7.8	3.99	1.26
		1997	874	96	337	72	3.97	18.8	29/11	1.60	18/08	7.7	2.96	1.69
		1998	1077	118	516	110	6.07	33.0	28/10	1.69	03/09	11.9	4.54	2.07
		1999	1138	125	551	117	6.48	28.5	25/12	2.02	15/09	12.8	5.16	2.09
		2000	1209	133	778	166	9.13	61.9	07/12	1.48	17/09	19.1	6.41	1.88
055013	**Arrow at Titley Mill** C.A: 126.4 km^2	**66..95**	**1010**		**595**		**2.39**	**101.1**	**10/01**	**0.09**	**28/09**	**5.5**	**1.46**	**0.27**
M.A: EA	Local No: 55013 Sens.: 10.8 B/full: 27.5m^3s^{-1}								**1986**		**1990**			
F.A.R: N	Level: 129m UE: <.01 FAI: 0.999													
Comment: Velocity-area station. Low flow control is a stable riffle; otherwise a three-bay road bridge 50m d/s is the control. Gets out of bank but not bypassed. Intake pipes silted up during summer of 1994, treat data with caution. 1995 summer flows suspect and under investigation by EA. Natural catchment. # Headwaters of moderate relief, draining durable Silurian slates and shales; otherwise, catchment underlain by Old Red Sandstone marls. Station is in a transition zone between upland plateau supporting sheep grazing and the more productive lowlands.		1996	852	84	451	76	1.80	21.8	11/02	0.17	10/10	4.1	1.20	0.19
		1997	942	93	409	69	1.64	21.4	24/02	0.22	16/09	4.1	0.81	0.25
		1998	1239	123	775	130	3.11	83.0	27/10	0.29	03/09	7.0	1.43	0.38
		1999	1304	129	766	129	3.07	32.6	24/12	0.25	14/09	7.8	1.72	0.29
		2000	1330	132	817	137	3.27	39.9	29/10	0.30	12/09	7.5	1.90	0.36
055028	**Frome at Bishops Frome** C.A: 77.7 km^2	**71..95**	**721**		**287**		**0.71**	**139.5**	**30/12**	**0.01**	**21/08**	**1.5**	**0.33**	**0.07**
M.A: EA	Local No: 55028 Sens.: 10.8 B/full: 12.0m^3s^{-1}								**1981**		**1995**			
F.A.R: N	Level: 76m UE: FAI:													
Comment: Flat V Crump profile weir 5m wide, replaced velocity-area station in 1975. Cableway span 10m. Steep banks do not contain flood flows; some throttling by d/s road bridge whose soffit is below bankfull. Natural catchment. # Linear, rural catchment, headwaters cutting into ORS of Bromyard plateau: NE and drier area of Wye catchment. Superficial deposits confined to valleys. Livestock farming on hills, arable otherwise.		1996	654	91	153	53	0.38	6.6	12/02	0.02	06/10	1.2	0.12	0.02
		1997	742	103	130	45	0.32	11.7	28/11	0.03	24/06	0.8	0.12	0.05
		1998	868	120	297	103	0.73	49.5	09/04	0.02	25/09	1.4	0.31	0.03
		1999	928	129										
		2000	996	138	462	161	1.14	31.9	05/12	0.09	07/09	2.8	0.47	0.12
055018	**Frome at Yarkhill** C.A: 144.0 km^2	**68..95**	**717**		**258**		**1.18**	**25.9**	**26/05**	**0.02**	**26/08**	**2.7**	**0.60**	**0.14**
M.A: EA	Local No: 55018 Sens.: 13.2 B/full: 20.0m^3s^{-1}								**1969**		**1976**			
F.A.R: E	Level: 55m UE: .01 FAI: 0.997													
Comment: Velocity-area station using a road bridge with a flat, insensitive invert and an adjacent box culvert as low and medium range controls. Broad floodplains operate above 2m when the Lodon tributary may bypass station. Natural catchment. No dmfs 15-26/9/98 due to recalibration problems at the station. # D/s of 55028 (Bishops Frome) lithology changes from Old Red Sandstone to Old Red Sandstone marls. Subdued relief, lowish rainfall. Entirely rural, predominantly arable farming with livestock on higher ground.		1996	636	89	172	67	0.79	10.9	26/03	0.09	19/09	1.6	0.46	0.12
		1997	722	101	153	59	0.70	11.9	28/11	0.19	19/08	1.5	0.39	0.20
		1998	848	118										
		1999	908	127	347	134	1.58	24.0	16/01	0.20	30/07	3.3	0.92	0.26
		2000	988	138	408	158	1.86	25.0	05/12	0.20	04/09	4.7	0.89	0.22
055029	**Monnow at Grosmont** C.A: 354.0 km^2	**48..95**	**1003**		**529**		**5.94**	**201.6**	**24/01**	**0.28**	**27/08**	**13.6**	**3.17**	**0.67**
M.A: EA	Local No: 55029 Sens.: 9.0 B/full: 160.0m^3s^{-1}								**1960**		**1976**			
F.A.R: N	Level: m UE: <.01 FAI: 0.997													
Comment: Velocity-area station with an informal Flat V weir enhancing the natural rock step control. Approx. 30m wide at bankfull. Cableway spans 42m. Replaced Kentchurch, 450m u/s (55009, 1948-72) which suffered from shoaling. Natural catchment. # Five parallel tributaries drain SE down the deeply dissected Old Red S'st plateau of the Black Mountains, the northern-most exposing the ORS marls. Moorland headwaters, arable lower reaches.		1996	894	89	536	101	6.00	128.3	08/01	0.40	18/09	13.8	3.15	0.45
		1997	971	97	440	83	4.94	108.8	24/02	0.58	20/08	13.1	1.89	0.78
		1998	1158	115	659	125	7.40	197.9	09/04	0.58	30/08	18.5	3.42	0.69
		1999	1173	117	696	132	7.82	152.8	23/12	0.62	01/08	17.4	4.59	0.82
		2000	1262	126	802	152	8.98	**206.6**	**07/12**	0.61	10/09	21.7	3.70	0.73
055023	**Wye at Redbrook** C.A: 4010.0 km^2	**36..95**	**1028**		**571**		**72.64**	**905.4**	**20/03**	**2.54**	**08/08**	**171.6**	**43.99**	**11.41**
M.A: EA	Local No: 55023 Sens.: 2.2 B/full: 612.0m^3s^{-1}								**1947**		**1990**			
F.A.R: SPE	Level: 9m UE: <.01 FAI: 0.979													
Comment: Channel control velocity-area station replacing Cadora (55001, 1937-71; 4040 sq.km. flows incorporated in the Redbrook series) which was tidally affected. All but extreme floods contained. Severe summer weed growth problems. Flow regime moderately modified by exports and regulation. Some naturalised data available. # Very large catchment of mixed Palaeozoic geology, Ordovician to Carboniferous, wet in west, dry in east and south. Moorland, forestry and grazing on higher ground; arable practice in lower reaches. Little industrial development.		1996	897	87	494	87	62.65	438.3	09/01	8.21	12/09	132.3	43.51	10.12
		1997	969	94	475	83	60.40	422.0	25/02	12.62	22/08	138.3	30.80	15.29
		1998	1253	122	824	144	104.73	860.5	29/10	12.06	22/08	272.3	52.37	19.62
		1999	1283	125	813	142	103.39	672.6	17/01	8.36	01/08	256.7	59.91	11.54
		2000	1397	136	979	171	124.15	**934.4**	**12/12**	11.23	07/09	295.0	70.62	13.49
056007	**Senni at Pont Hen Hafod** C.A: 19.9 km^2	**67..95**	**1937**		**1583**		**1.00**	**48.8**	**27/12**	**0.03**	**23/08**	**2.3**	**0.53**	**0.10**
M.A: EA	Local No: Sens.: S/full: 24.0m^3s^{-1}								**1979**		**1976**			
F.A.R: N	Level: 220m UE: <.01 FAI: 1.000													
Comment: Flat Vee weir replaced Crump weir (width: 7.01m) from Decemeber 1997. No dmfs 03/09 - 04/12/97. Crump weir was full range, modular, theoretically calibrated and confirmed by gaugings. Fish pass removed in 1973. # Geology: Old Red Sandstone. Natural catchment draining from high rainfall, upland area. Livestock farming area with mainly peaty soils, seasonally wet. Forest: 5%. Catchment fully contained in the Brecon Beacons National Park.		1996	1706	88	1425	90	0.90	22.3	27/10	0.09	18/09	2.2	0.49	0.11
		1997	1847	95										
		1998	2687	139	2482	157	1.57	**53.1**	**22/10**	0.19	31/05	3.4	0.76	0.29
		1999	2249	116	1877	119	1.18	29.9	15/01	0.06	01/08	3.0	0.51	0.09
		2000	2669	138	2263	143	1.42	34.4	28/10	0.14	12/08	3.3	0.75	0.18
056013	**Yscir at Pontaryscir** C.A: 62.8 km^2	**72..95**	**1430**		**975**		**1.94**	**85.0**	**06/10**	**0.08**	**23/08**	**4.7**	**1.12**	**0.19**
M.A: EA	Local No: Sens.: S/full: 84.0m^3s^{-1}								**1985**		**1976**			
F.A.R: N	Level: 161m UE: <.01 FAI: 1.000													
Comment: Crump weir (width: 9m) between old railway abutments. Calibration confirmed by gaugings. Full range. Rarely non-modular. # Geology: Old Red Sandstone. Natural catchment draining from upland areas of Cambrian Hills. Mostly hill farming. Forest: 3%. Peaty soils in upper areas, seasonally wet.		1996	1067	75	750	77	1.49	15.3	08/01	0.12	18/09	3.7	0.94	0.13
		1997	1150	80	783	80	1.56	20.5	12/02	0.17	19/08	3.8	0.71	0.24
		1998	1675	117	1375	141	2.74	62.9	22/10	0.35	31/05	6.2	1.38	0.44
		1999	1643	115	1305	134	2.60	34.1	01/10	0.19	02/08	6.4	1.47	0.28
		2000	1797	126	1520	156	3.02	56.6	29/10	0.25	13/09	6.9	1.95	0.32
056012	**Grwyne at Millbrook** C.A: 82.2 km^2	**71..95**	**1246**		**766**		**2.00**	**74.2**	**27/12**	**0.15**	**23/08**	**4.5**	**1.40**	**0.34**
M.A: EA	Local No: Sens.: 26.5 S/full: 77.0m^3s^{-1}								**1979**		**1976**			
F.A.R: S	Level: 83m UE: <.01 FAI: 0.988													
Comment: Crump weir of reinforced concrete and local stone with phosphor bronze crest 10.67m wide. Fish counter on d/s side of crest. # Geology: predominantly ORS conglomerates, s'st and marl. Landuse: principally livestock farming with some afforestation.		1996	1168	94	686	90	1.78	19.2	08/01	0.21	18/09	3.8	1.32	0.26
		1997	1204	97	655	86	1.71	12.8	26/06	0.35	19/08	4.0	0.95	0.46
		1998	1572	126	988	129	2.58	40.1	22/10	0.36	03/09	6.3	1.53	0.45
		1999	1484	119	980	128	2.55	28.9	19/09	0.35	01/08	5.7	1.64	0.47
		2000	1635	131	1077	141	2.80	28.3	29/10	0.33	12/09	6.5	1.89	0.41

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
056001	**Usk at Chain Bridge** C.A: 911.7 km^2	**57..95**	**1390**		**965**		**27.90**	**945.0**	**27/12**	**1.61**	**27/08**	**64.6**	**16.32**	**4.15**
M.A: EA	Local No: Sens.: 5.8 B/full: 700.0m^3s^{-1}								**1979**		**1976**			
F.A.R: SRP	Level: 23m UE: <.01 FAI: 0.982													
Comment: Velocity-area station; permanent cableway. Refer to complementary station d/s (56010 - Trostrey, a 27.43m wide Crump weir) for flows <21 m^3s^{-1}. Partial impact on flows resulting from three large existing PWS reservoirs in upper catchment. Intake to canal u/s of gauge. Some naturalised flows available. # Geology: mainly Old Red Sandstone. Hill farming in upper areas, with dairy or livestock farming below; forest 3%. Peaty soils in uplands, seasonally wet.		1996	1181	85	791	82	22.79	300.2	08/01	2.64	27/09	52.7	15.41	2.87
		1997	1275	92	780	81	22.56	361.7	17/02	3.38	20/08	53.9	9.96	4.45
		1998	1737	125	1306	135	37.74	654.1	23/10	4.88	03/09	99.8	18.74	6.14
		1999	1670	120	1194	124	34.48	492.4	16/01	3.09	07/08	77.8	20.54	4.32
		2000	1862	134	1461	151	42.14	548.3	30/10	4.54	18/08	99.2	23.34	5.42
056015	**Olway Brook at Olway Inn** C.A: 105.1 km^2	**75-95**	**970**		**444**		**1.48**	**21.5**	**07/02**	**0.03**	**25/08**	**3.7**	**0.65**	**0.10**
M.A: EA	Local No: Sens.: 9.1 S/full: 15.8m^3s^{-1}								**1990**		**1976**			
F.A.R:	Level: 15m UE: <.01 FAI: 1.000													
Comment: Crump weir 4.0m wide. Bypassing occurs above 1.8m into surrounding fields. # Geology: Lower Old Red Sandstone, Drift free except for alluvium in flat valley bottom. Entirely rural, patchy woodland.		1996	863	89	422	95	1.40	17.2	10/02	0.12	05/08	2.9	0.89	0.14
		1997	978	101	400	90	1.33	18.0	24/02	0.15	19/08	3.2	0.45	0.21
		1998	1110	114	547	123	1.82	18.3	04/03	0.12	23/09	5.1	0.85	0.14
		1999	1161	120	561	126	1.87	19.4	24/12	0.15	02/08	4.4	0.98	0.18
		2000	1333	137	832	187	2.77	39.8	**30/10**	0.13	12/09	7.7	1.10	0.17
056002	**Ebbw at Rhiwderyn** C.A: 216.5 km^2	**57..95**	**1506**		**1067**		**7.32**	**249.5**	**07/02**	**0.73**	**28/09**	**16.5**	**4.61**	**1.40**
M.A: EA	Local No: Sens.: 8.3 B/full: 242.0m^3s^{-1}								**1990**		**1990**			
F.A.R: SPG	Level: 31m UE: .05 FAI: 0.977													
Comment: Velocity-area station. Low flow Flat V weir (width: 14.5m, cross-slope 1:20) installed in 1976. Weir refurbished, station completely rebuilt so no dm/s 19/07/96 - 05/01/97. Discharges up to MAF contained. 2000 peak may be overestimated. Small water supply reservoirs in uplands. Some gw abstractions in valley. Drainage water from old coalmines can also influence flows. # Geology: mainly Coal Measures. Livestock farming on hills. Forest: 7%. Soils mainly have permeable substrates.		1996	1321	88											
		1997	1430	95	970	91	6.66	-				15.6	3.52	1.93
		1998	1863	124	1412	132	9.70	248.3	22/10	1.49	03/09	22.6	5.01	1.84
		1999	1730	115	1330	125	9.13	121.0	15/01	1.33	01/08	20.7	5.35	1.58
		2000	1945	129	1510	142	10.34	**402.4**	**29/10**	1.12	12/09	23.0	6.04	1.48
057008	**Rhymney at Llanedeyrn** C.A: 178.7 km^2	**73-95**	**1425**		**955**		**5.41**	**156.7**	**07/02**	**0.22**	**16/09**	**12.6**	**3.03**	**0.70**
M.A: EA	Local No: Sens.: 11.1 S/full: 65.2m^3s^{-1}								**1990**		**1990**			
F.A.R: SPGE	Level: 12m UE: .05 FAI: 0.983													
Comment: Flat V weir (width: 15m, cross-slope 1:20); velocity-area station for high flows. Full range. Impounding reservoirs, for public water supply, in upper catchment. Some groundwater abstraction and effluent returns. # Geology: mainly Coal Measures. Livestock farming on uplands; dairy and livestock farming in lower catchment. Urban and industrial development in the valleys. Forest 7%. Most of catchment has soils with permeable substrate; peaty soils on hills, seasonally wet.		1996	1276	90	891	93	5.03	102.6	27/10	0.49	23/09	11.6	2.93	0.62
		1997	1432	100	930	97	5.27	110.6	17/02	0.91	02/08	12.2	2.37	1.16
		1998	1855	130	1378	144	7.81	**165.9**	**22/10**	0.90	03/09	17.2	3.61	1.23
		1999	1757	123	1247	131	7.07	125.3	23/12	0.69	14/09	17.2	3.78	0.87
		2000	1952	137	1509	158	8.53	165.7	30/10	0.87	13/09	19.6	4.69	1.14
057015	**Taff at Merthyr Tydfil** C.A: 104.1 km^2	**78..95**	**1986**		**1049**		**3.46**	**140.1**	**27/12**	**0.28**	**22/08**	**8.4**	**1.44**	**0.74**
M.A: EA	Local No: Sens.: 11.4 S/full: 10.6m^3s^{-1}								**1979**		**1984**			
F.A.R: SP	Level: 171m UE: <.01 FAI: 0.851													
Comment: Flat V weir; velocity-area station for high flows. Full range. Weir destroyed by Dec 1979 flood, treat this HIF with caution. Flows affected by large direct PWS reservoirs. # Geology: Millstone Grit and Carboniferous L'st. Old Red S'st in upper areas. Upland area in Brecon Beacons National Park - livestock farming predominates; some urban development. Forest: 25%. Mainly peaty soils, seasonally wet.		1996	1622	82	755	72	2.49	52.8	26/10	0.61	18/09	5.6	1.28	0.66
		1997	1764	89	853	81	2.81	59.3	17/02	0.79	02/08	7.2	1.20	0.85
		1998	2484	125	1622	155	5.35	**258.2**	**22/10**	0.88	31/05	11.8	1.78	0.99
		1999	2171	109	1367	130	4.51	98.2	15/01	0.75	01/08	11.5	1.60	0.81
		2000	2519	127	1666	159	5.49	146.0	29/10	0.72	12/08	14.2	2.09	0.81
057007	**Taff at Fiddlers Elbow** C.A: 194.5 km^2	**73..95**	**1740**		**1062**		**6.55**	**320.5**	**27/12**	**0.56**	**22/08**	**15.4**	**3.40**	**1.25**
M.A: EA	Local No: Sens.: 9.4 S/full: 76.0m^3s^{-1}								**1979**		**1976**			
F.A.R: SGEI	Level: 83m UE: .03 FAI: 0.908													
Comment: Flat V weir (width: 23m; cross-slope 1:20) velocity-area station for high flows. Full range. Flows affected by mine-water discharges u/s, also impounding reservoirs and industrial abstractions in valley. # Geology: Coal Measures with Millstone Grit and Carboniferous L'st in northern area. Alluvium deposits in valleys. Mainly upland area with livestock. Peaty soils, seasonally wet. Forest 3%. 50% in Brecon Beacons National Park.		1996	1517	87	833	78	5.13	84.0	27/10	0.93	18/09	11.5	2.94	1.08
		1997	1667	96	912	86	5.63	123.3	17/02	1.32	02/08	13.7	2.41	1.50
		1998	2277	131	1586	149	9.78	**348.4**	**22/10**	1.54	03/09	21.2	4.05	1.82
		1999	2053	118	1364	128	8.41	173.0	15/01	1.26	01/08	20.5	3.83	1.44
		2000	2325	134	1622	153	9.98	261.8	29/10	1.53	11/08	23.1	4.83	1.70
057004	**Cynon at Abercynon** C.A: 106.0 km^2	**57..95**	**1820**		**1252**		**4.21**	**184.2**	**27/12**	**0.25**	**12/09**	**10.6**	**2.10**	**0.52**
M.A: EA	Local No: Sens.: 14.3 B/full: 200.0m^3s^{-1}								**1979**		**1989**			
F.A.R: SE	Level: 81m UE: .04 FAI: 0.980													
Comment: Flat V weir (width: 14.24m; cross-slope 1:20) velocity-area station for high flows. Over-topped by extreme floods. Small impounding reservoirs for PWS. Industrial areas in valley. # Geology: Coal Measures with Millstone Grit on northern boundary. Open cast coal abstraction in upper areas. Livestock farming in upland area of peaty soils, seasonally wet. Forest: 17%.		1996	1678	92	1194	95	4.00	62.8	27/10	0.40	18/09	9.9	1.93	0.53
		1997	1761	97	1340	107	4.50	95.9	17/02	0.49	25/07	11.4	1.90	0.78
		1998	2303	127	1761	141	5.92	143.5	22/10	0.66	03/09	13.7	2.40	0.82
		1999	2214	122	1591	127	5.35	102.7	15/01	0.45	01/08	14.1	2.53	0.64
		2000	2531	139	1769	141	5.93	122.2	29/10	0.62	12/08	14.3	3.18	0.75
057006	**Rhondda at Trehafod** C.A: 100.5 km^2	**70..95**	**2246**		**1745**		**5.56**	**206.4**	**27/12**	**0.30**	**21/07**	**13.2**	**2.94**	**0.73**
M.A: EA	Local No: Sens.: 15.5 B/full: 330.0m^3s^{-1}								**1979**		**1984**			
F.A.R: SPGE	Level: 68m UE: .06 FAI: 0.985													
Comment: Velocity-area station; trapezoidal channel formalised in 1980, bed width 18m. Full range. Flows affected by mine-water discharge above station, and Trehafod Flood Alleviation Scheme. Impounding reservoir for PWS in upper catchment. # Geology: Coal Measures with alluvium deposits in valleys. Upland area with livestock farming on hills. Urban and industrial development in valleys. 24% forested.		1996	2041	91	1597	92	5.08	99.4	26/10	0.57	23/09	12.9	2.32	0.72
		1997	2263	101	1711	98	5.45	107.7	17/02	0.85	25/07	12.9	2.26	0.94
		1998	3001	134	2685	154	8.56	142.9	22/10	0.95	31/05	21.2	4.10	1.50
		1999	2615	116	2199	126	7.01	109.5	15/01	0.79	01/08	18.2	3.54	1.15
		2000	3165	141	2801	161	8.90	159.0	27/09	1.17	12/08	20.0	5.53	1.58
057005	**Taff at Pontypridd** C.A: 454.8 km^2	**70..95**	**1872**		**1325**		**19.11**	**652.0**	**27/12**	**1.70**	**23/08**	**42.0**	**10.63**	**3.49**
M.A: EA	Local No: Sens.: 5.9 S/full: 58.3m^3s^{-1}								**1979**		**1976**			
F.A.R: SGEI	Level: 45m UE: .04 FAI: 0.951													
Comment: Flat V weir (width: 32m; cross-slope 1:20) velocity-area station for high flows. Full range. No dm/s 06/07 - 03/08/98 due to collapse of inlet pipes. Small impounding reservoir in upper catchment. Some gw abstractions and effluent returns in valleys. # Geology: mainly Coal Measures. Alluvium deposits in valleys. Mainly upland area with livestock farming on hills. Urban and industrial development in valleys. Mainly peaty soils on hills, seasonally wet.		1996	1680	90											
		1997	1839	98	1185	89	17.09	324.6	17/02	3.90	02/08	37.4	7.94	4.35
		1998	2454	131										
		1999	2225	119	1593	120	22.98	397.0	15/01	3.56	01/08	55.8	12.09	4.56
		2000	2573	137	2113	159	30.38	472.2	29/10	4.58	12/08	70.7	17.48	5.57
057009	**Ely at St Fagans** C.A: 145.0 km^2	**75-95**	**1374**		**955**		**4.39**	**69.3**	**30/11**	**0.32**	**21/08**	**10.2**	**2.61**	**0.57**
M.A: EA	Local No: Sens.: 12.7								**1992**		**1984**			
F.A.R: EI	Level: m UE: .03 FAI: 0.987													
Comment: Flat V weir (width: 10.6m; cross-slope 1:20); velocity-area station for high flows. Full range. Flows affected by sewage works discharges u/s. Some early - poorer quality - data available (station 57805; 1957-60). Some industrial abstractions. # Geology: mainly Coal Measures with some Millstone Grit in northern area; mixture of Trias, Lias, l'st and ORS to the S. Forest 6%. Lowland area with dairy farming. Soils have permeable substrate.		1996	1275	93	879	92	4.03	45.8	27/10	0.44	18/09	9.4	2.42	0.51
		1997	1406	102	917	96	4.22	49.6	12/02	0.66	22/07	10.4	1.99	0.87
		1998	1829	133	1447	152	6.65	**76.2**	**06/03**	1.01	25/05	16.1	3.45	1.28
		1999	1639	119	1192	125	5.48	61.5	24/12	0.52	31/07	13.1	3.20	0.84
		2000	1954	142	1513	158	6.94	**78.9**	**30/10**	0.71	12/08	15.3	4.33	0.91
058011	**Thaw at Gigman Bridge** C.A: 49.2 km^2	**76..95**	**1179**		**842**		**1.00**	**6.9**	**30/11**	**0.06**	**27/07**	**2.3**	**0.71**	**0.15**
M.A: EA	Local No: 58011 Sens.: 23.6								**1992**		**1984**			
F.A.R: GE	Level: 7m UE: .01 FAI: 1.000													
Comment: BS Flat Vee weir for low and medium flows, US for high flows, commissioned April 1999. Replaced non-standard bed control weir; velocity-area calibration based on gaugings from bridge u/s. Station was taken off-line in September 1998 for complete rebuild. Flows affected by effluent discharges and gw abstractions. # Mixed geology: Lias; Trias; Carboniferous Limestone and Old Red Sandstone. Lowland area in the Vale of Glamorgan with dairy and livestock farming. Soils have permeable substrate.		1996	1006	85	568	88	0.88	5.4	29/11	0.15	23/09	1.9	0.73	0.18
		1997	1150	98	577	90	0.90	5.7	03/09	0.17	25/07	2.1	0.55	0.22
		1998	1492	127										
		1999	1335	113										
		2000	1600	136	1298	202	2.02	**22.8**	**29/10**	0.19	30/08	3.7	1.16	0.23

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
058009	**Ewenny at Keepers Lodge** C.A: 62.5 km^2	**71..95**	**1363**		**947**		**1.88**	**73.7**	**30/10**	**0.16**	**23/08**	**4.0**	**1.26**	**0.38**
M.A: EA	Local No: 58009 Sens.: 13.9 B/full: 85.0 m^3s^{-1}								**1994**		**1976**			
F.A.R: E	Level: 8m UE: .04 FAI: 1.000													
Comment: Flat V weir (1:15 cross-slope terminating in a 1:2 sloping revetment); velocity-area calibration for high flows. All flows contained. Channel width 12.25m. Poorer quality data (1962-1965) available for u/s station Ewenny Priory (58003). # Geology: north - Coal Measures. South - mixture of Millstone Grit; Carboniferous Limestone; Trias; Lias and alluvial deposits. Lowland area with urban and industrial development and dairy and livestock farming. Soils have permeable substrate.		1996	1222	90	664	70	1.31	31.4	20/10	0.26	23/09	2.7	0.89	0.30
		1997	1343	99	651	69	1.29	41.5	03/09	0.32	22/07	2.9	0.67	0.39
		1998	1755	129	1241	131	2.46	**80.2**	**31/10**	0.54	04/06	5.4	1.39	0.61
		1999	1557	114	981	104	1.94	60.5	23/12	0.34	01/08	4.3	1.19	0.40
		2000	1873	137	1304	138	2.58	**81.3**	**29/10**	0.34	30/08	5.2	1.58	0.40
058005	**Ogmore at Brynmenyn** C.A: 74.3 km^2	**70..95**	**1948**		**1549**		**3.65**	**105.7**	**30/10**	**0.18**	**20/08**	**8.1**	**2.37**	**0.52**
M.A: EA	Local No: 58005 Sens.: 14.1 B/full: 365.0 m^3s^{-1}								**1994**		**1984**			
F.A.R: E	Level: 43m UE: .02 FAI: 0.999													
Comment: Flat V weir; velocity-area station for high flows. All flows contained. Effluent discharge to river u/s. # Geology: Coal Measures. Livestock farming in upland area with urban and industrial development in the valleys. Forest 21%. Peaty soils in upper areas, seasonally wet. Soils in lower areas have permeable substrate.		1996	1836	94	1410	91	3.31	57.5	23/05	0.36	05/08	7.7	2.08	0.43
		1997	2026	104	1426	92	3.36	55.6	11/02	0.59	25/07	7.5	1.74	0.71
		1998	2686	138	2458	159	5.79	**135.9**	**05/03**	0.76	31/05	11.9	3.54	1.07
		1999	2313	119	1793	116	4.23	53.1	02/03	0.60	01/08	10.6	2.47	0.79
		2000	2839	146	2509	162	5.90	85.5	29/10	0.86	12/08	12.1	3.99	1.23
058007	**Llynfi at Coytrahen** C.A: 50.2 km^2	**70..95**	**1812**		**1410**		**2.24**	**96.2**	**30/10**	**0.17**	**26/08**	**5.0**	**1.44**	**0.35**
M.A: EA	Local No: 58007 Sens.: 18.2 B/full: 180.0 m^3s^{-1}								**1994**		**1984**			
F.A.R: EI	Level: 50m UE: .04 FAI: 0.997													
Comment: Flat V weir and velocity-area station. Industrial abstractions and effluent returns. Channel width 15m: full range. # Geology: Coal Measures. Upland area with livestock farming. Forest: 16%. Mainly peaty soils, seasonally wet.		1996	1677	93	1216	86	1.93	52.3	20/10	0.24	21/09	5.0	1.10	0.32
		1997	1772	98	1263	90	2.01	56.3	03/09	0.42	31/01	4.9	0.88	0.46
		1998	2419	133	2235	159	3.56	88.3	24/10	0.47	31/05	7.6	2.12	0.59
		1999	2055	113	1562	111	2.49	44.4	15/01	0.36	01/08	6.3	1.42	0.47
		2000	2508	138	2168	154	3.44	64.2	27/09	0.44	12/08	7.1	2.30	0.61
058001	**Ogmore at Bridgend** C.A: 158.0 km^2	**63..95**	**1758**		**1289**		**6.46**	**175.5**	**30/10**	**0.33**	**20/08**	**14.3**	**4.08**	**0.93**
M.A: EA	Local No: 58001 Sens.: 11.2 B/full: 170.0 m^3s^{-1}								**1994**		**1984**			
F.A.R: PEI	Level: 14m UE: .04 FAI: 0.998													
Comment: Velocity-area station with Flat V weir (1:20 cross-slope; installed in Jul 1975). Channel width: 20m. Flows up to 170 m^3s^{-1} contained. # Geology: mainly Coal Measures. Forest 16%. N area - uplands with livestock farming. S area - lowland with dairy and livestock farming. Urban and industrial development in valleys. Peaty soils on hills, seasonally wet. In lower areas, soils have permeable substrate.		1996	1653	94	1175	91	5.87	115.0	20/10	0.68	22/09	14.0	3.57	0.83
		1997	1794	102	1187	92	5.95	117.3	03/09	1.17	02/08	13.8	3.00	1.41
		1998	2394	136	2043	158	10.24	**178.8**	**24/10**	1.36	31/05	21.3	6.63	1.89
		1999	2058	117	1471	114	7.37	102.2	01/10	0.80	01/08	18.4	4.37	1.29
		2000	2513	143	2033	158	10.16	173.5	29/10	1.46	12/08	20.9	6.99	2.09
058012	**Afan at Marcroft Weir** C.A: 87.6 km^2	**78..95**	**2094**		**1833**		**5.10**	**137.0**	**01/12**	**0.43**	**20/08**	**11.6**	**3.02**	**0.80**
M.A: EA	Local No: 58012 Sens.: B/full: 313.0 m^3s^{-1}								**1992**		**1984**			
F.A.R: P	Level: 18m UE: FAI:													
Comment: Non-standard compound Crump profile weir. No divide walls between centre and side weirs. Channel width: 17.2m. High river velocities due to steep gradients and steep valley sides. Minewater discharges in upper catchment have severly affected water quality. # Geology: Coal Measures. 50-60% forested, remainder rough grazing. Past mining activity evident, restoration schemes employed.		1996	1925	92	1533	84	4.26	92.0	23/05	0.62	23/09	9.9	2.37	0.69
		1997	2037	97	1534	84	4.27	118.4	03/09	0.83	31/01	9.4	2.07	1.00
		1998	2842	136	2583	141	7.19	**146.5**	**22/10**	1.04	31/05	16.4	4.02	1.52
		1999	2381	114	1924	105	5.36	118.2	15/01	1.00	01/08	12.5	3.15	1.19
		2000	2949	141	2535	138	7.04	**148.9**	**27/09**	1.16	26/07	14.8	4.93	1.58
058006	**Melite at Pontneddfechan** C.A: 65.8 km^2	**71..95**	**2052**		**1482**		**3.09**	**127.6**	**27/12**	**0.17**	**21/08**	**7.5**	**1.49**	**0.34**
M.A: EA	Local No: 58006 Sens.: 14.7 B/full: 325.0 m^3s^{-1}								**1979**		**1984**			
F.A.R: SP	Level: 86m UE: <.01 FAI: 0.975													
Comment: Flat V weir and velocity-area station; channel width 15m. Steep section with heavy bed load. PWS reservoir in catchment has partial effect on flows. # Geology: from S to N - Millstone Grit; Carboniferous L'st and ORS. Mainly an upland, pasture catchment.		1996	1732	84	1354	91	2.82	58.7	28/10	0.34	22/09	6.9	1.31	0.37
		1997	1836	89	1427	96	2.98	58.2	17/02	0.51	20/08	7.2	1.20	0.55
		1998	2694	131	2290	155	4.78	**129.4**	**22/10**	0.58	31/05	9.9	2.70	0.82
		1999	2294	112	1946	131	4.06	80.8	15/01	0.45	01/08	10.3	1.84	0.57
		2000	2699	132	2306	156	4.80	77.3	29/10	0.56	12/08	10.9	3.12	0.70
058002	**Neath at Resolven** C.A: 190.9 km^2	**62..95**	**1999**		**1374**		**8.31**	**322.8**	**27/12**	**0.05**	**02/10**	**22.0**	**3.95**	**0.58**
M.A: EA	Local No: 58002 Sens.: 13.1 B/full: 370.0 m^3s^{-1}								**1979**		**1964**			
F.A.R: SPEI	Level: 15m UE: <.01 FAI: 0.987													
Comment: Flat V weir (installed in 1978); velocity-area station for high flows; channel width: 28m. Some u/s right-bank spillage during floods. PWS reservoir in upper catchment. Industrial abstractions and effluent returns. Some records from 1961 available. # Geology: from S to N - Coal Measures; Millstone Grit; Carboniferous L'st and ORS. A mainly upland catchment; livestock farming predominates, urban and industrial development in valley.		1996	1777	89	1372	100	8.28	150.0	27/10	0.81	23/09	21.5	3.74	1.02
		1997	1833	92	1370	100	8.29	174.5	17/02	1.21	19/08	20.9	3.42	1.37
		1998	2645	132	2202	160	13.33	**350.1**	**22/10**	1.44	31/05	30.5	6.57	2.14
		1999	2265	113	1915	139	11.59	171.4	15/01	1.07	01/08	28.0	5.49	1.50
		2000	2688	134	2388	174	14.42	201.5	27/09	1.60	26/07	34.0	9.17	2.22
058008	**Dulais at Cilfrew** C.A: 43.0 km^2	**71..95**	**1777**		**1418**		**1.93**	**85.4**	**04/11**	**0.12**	**21/08**	**4.7**	**1.04**	**0.24**
M.A: EA	Local No: 58008 Sens.: 13.7 B/full: 180.0 m^3s^{-1}								**1973**		**1984**			
F.A.R:	Level: 42m UE: <.01 FAI: 1.000													
Comment: Compound Crump weir and Flat V weir from Aug 1991. Formerly Flat V weir (1:10 cross slope) flanked by horizontal side section - no divide piers; velocity-area calibration for high flows. D/s of single arch railway bridge of limited discharge capacity. # Geology: Coal Measures. Upland area with livestock farming and open cast coal mining. Forest: 18%. Mainly peaty soils, seasonally wet.		1996	1686	95	1265	89	1.72	42.4	26/10	0.18	05/08	4.4	0.83	0.20
		1997	1678	94	1298	92	1.77	54.4	08/10	0.24	04/06	4.4	0.66	0.28
		1998	2412	136	2055	145	2.80	64.3	24/10	0.28	30/05	6.9	1.44	0.48
		1999	2067	116	1685	119	2.30	35.3	05/11	0.22	01/08	5.9	1.12	0.30
		2000	2490	140	2166	153	2.95	45.1	27/09	0.39	26/07	6.8	1.93	0.51
059001	**Tawe at Ynystanglws** C.A: 227.7 km^2	**57..95**	**1903**		**1670**		**12.06**	**461.3**	**27/12**	**0.45**	**03/10**	**29.1**	**6.34**	**1.41**
M.A: EA	Local No: 59001 Sens.: 8.9 B/full: 460.0 m^3s^{-1}								**1979**		**1959**			
F.A.R: GEI	Level: 9m UE: .02 FAI: 0.997													
Comment: Velocity-area station. Gravel bed - unstable control. All but extreme floods contained since construction of floodbanks (1959). L'st outcrop at north of catchment has partial effect on baseflow. Gw and industrial abstractions also. # Geology: principally Coal Measures. Mainly upland area with livestock farming. Urban and industrial development at lower levels. Forest: 8%. 30% in Brecon Beacons National Park.		1996	1728	91	1375	82	9.90	272.0	27/10	1.24	05/08	24.5	4.91	1.47
		1997	1695	89	1314	79	9.48	241.3	17/02	1.64	23/07	22.8	4.13	1.86
		1998	2486	131	2180	131	15.74	373.4	22/10	1.69	31/05	35.7	7.50	2.68
		1999	2127	112	1730	104	12.49	228.8	15/01	1.29	01/08	32.3	6.79	1.86
		2000	2548	134	2063	124	14.86	245.5	27/09	1.85	26/07	34.9	8.95	2.49
059002	**Loughor at Tir-y-dail** C.A: 46.4 km^2	**67..95**	**1545**		**1363**		**2.01**	**143.6**	**05/08**	**0.08**	**11/06**	**4.7**	**1.11**	**0.31**
M.A: EA	Local No: 59002 Sens.: 21.2 B/full: 121.0 m^3s^{-1}								**1973**		**1968**			
F.A.R: PGEI	Level: 31m UE: .01 FAI: 0.999													
Comment: Velocity-area station with bed control built over sewer crossing. Right bank overtopped on rare occasions. Public water supply abstraction from main spring source. Gw and industrial abstractions and effluent returns. # Geology: mainly Coal Measures, with Millstone Grit, Carboniferous L'st and ORS in northern half of catchment. Mainly dairy farming. Soils generally have permeable substrate.		1996	1404	91	1315	96	1.93	58.2	26/10	0.33	23/09	4.5	1.04	0.39
		1997	1408	91	1238	91	1.82	53.0	17/02	0.40	02/08	4.1	0.84	0.44
		1998	1934	125	2063	151	3.03	122.0	22/10	0.62	05/06	6.0	1.61	0.74
		1999	1761	114	1671	123	2.46	66.9	05/11	0.37	01/08	5.8	1.41	0.46
		2000	2105	136	2194	161	3.22	75.5	29/10	0.53	12/08	7.3	1.92	0.64
060008	**Tywi at Ystradffin** C.A: 89.8 km^2	**83..95**	**1821**		**1439**		**4.10**	**97.2**	**18/10**	**0.37**	**15/11**	**8.7**	**2.86**	**1.09**
M.A: EA	Local No: 60008 Sens.:								**1987**		**1990**			
F.A.R: SR	Level: 175m UE: FAI:													
Comment: Crump weir, single crest. Site owned by water company. Artificial flow regime - station used principally to monitor compensation and regulated flows from Llyn Brianne Res. # A mostly forested catchment with some rough grazing developed on Ordivician and Silurian formations.		1996	1540	85	1034	72	2.94	30.8	11/02	0.70	01/01	4.6	2.80	0.85
		1997	1627	89	1186	82	3.38	34.2	28/11	0.85	05/02	6.4	2.81	0.94
		1998	2388	131	1843	128	5.25	58.7	22/10	0.83	10/05	10.2	3.25	0.95
		1999	2328	128	1736	121	4.94	41.3	02/03	0.76	27/10	9.5	2.97	0.89
		2000	2575	141	2040	142	5.79	56.0	30/10	0.82	19/03	11.9	3.57	1.16

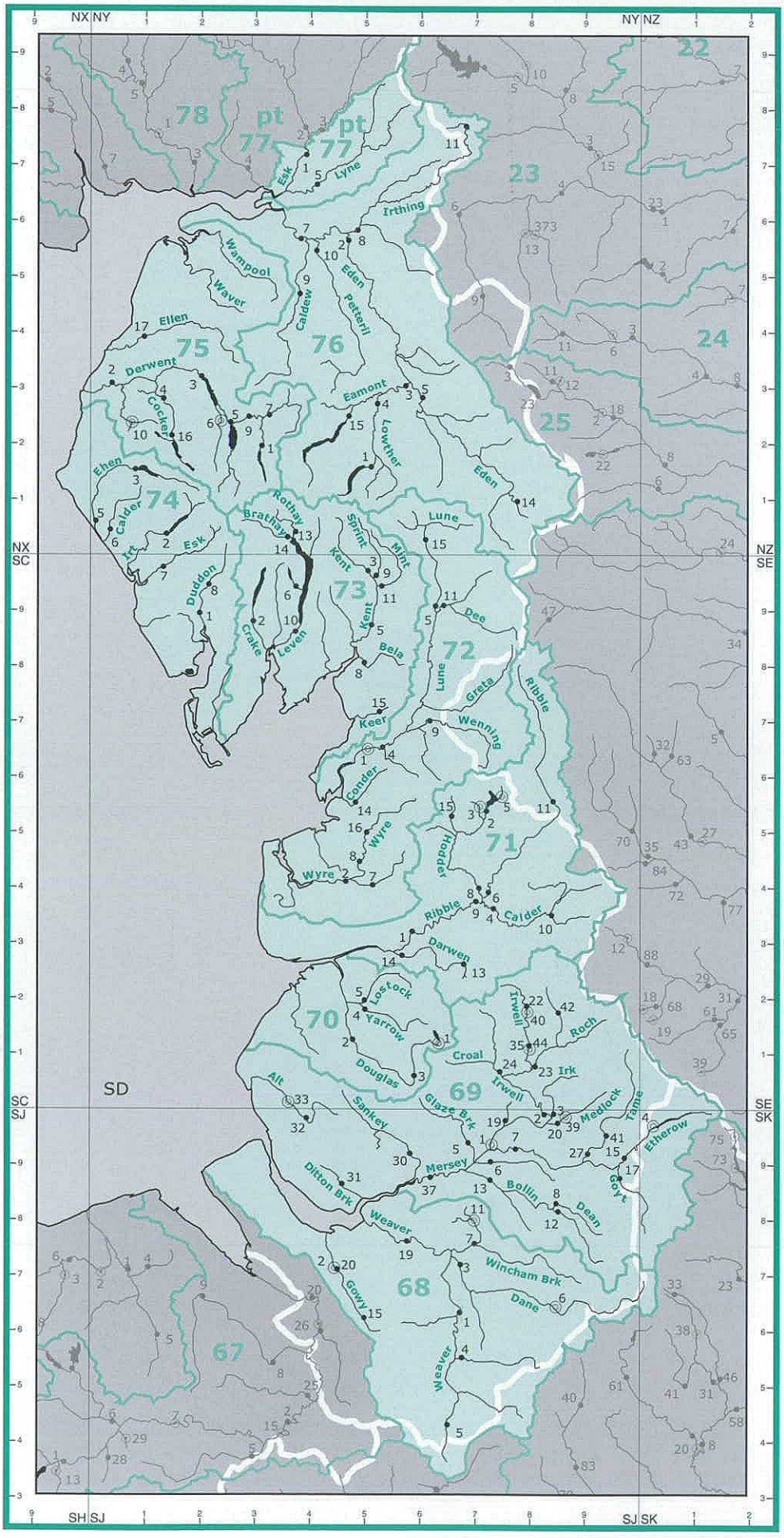
		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
060007	**Tywi at Dolau Hirion** C.A: 231.8 km^2	**68..95**	**1707**		**1326**		**9.75**	**162.0**	**02/12 1992**	**0.40**	**15/09 1971**	**22.1**	**5.60**	**2.02**
M.A: EA	Local No: 60007 Sens.: 9.5 B/full: 670.0m^3s^{-1}													
F.A.R: SREI	Level: 69m UE: <.01 FAI: 0.934													
Comment: Velocity-area station. Stable section with natural control. Channel width: 38m. River regulated with large reservoir (Llyn Brianne) in upper catchment. Suspect flows Mar 95 - Oct 96, removed from NRFA pending investigation. # Geology: principally Ordovician. Upland areas of Cambrian Hills. Mostly hill farming with some livestock at lower levels. Forest: 17%. Mainly peaty soils, seasonally wet.		1996	1455	85										
		1997	1543	90	1178	89	8.66	85.0	28/11	2.53	23/03	18.7	4.53	3.11
		1998	2231	131	2135	161	15.69	**169.0**	**22/10**	1.92	19/08	32.6	8.64	2.52
		1999	2160	127	1763	133	12.96	109.4	02/03	1.64	25/06	30.2	7.76	2.11
		2000	2394	140	2174	164	15.94	146.4	30/10	2.20	22/03	33.2	9.17	3.35
060005	**Bran at Llandovery** C.A: 66.8 km^2	**68..95**	*1510*		**1054**		**2.23**	**86.0**	**14/02 1971**	**>0.00**	**02/09 1995**	**5.4**	**1.15**	**0.12**
M.A: EA	Local No: 60005 Sens.: 29.4 B/full: 65.0m^3s^{-1}													
F.A.R: I	Level: 65m UE: <.01 FAI: 0.997													
Comment: Ultrasonic installed, record from Dec 1995, Flat V weir for low flows. Replaced velocity-area station with records from 1968, bed control installed 1972. Channel width: 7.5m. Agricultural abstractions have a minimal impact on flow records. # Geology: Ordovician with alluvium deposits on valley floor. Forest: 38%. Hill farming on uplands, dairy farming in valleys. Peaty soils, seasonally wet, in hill area. Soils have permeable substrate in lower areas.		1996	1296	86	759	72	1.60	21.9	03/11	0.06	23/09	3.9	0.99	0.09
		1997	1442	95	926	88	1.96	26.4	17/02	0.12	19/08	5.1	0.91	0.21
		1998	2032	135	1753	166	3.71	**94.1**	**22/10**	0.20	01/06	8.1	2.03	0.42
		1999	1922	127	1542	146	3.27	46.9	02/03	0.09	14/09	7.6	2.12	0.16
		2000	2100	139										
060009	**Sawdde at Felin-y-cwm** C.A: 77.5 km^2	**70..95**	**1758**		**1328**		**3.26**	**170.3**	**01/12 1992**	**0.10**	**14/09 1988**	**7.3**	**1.72**	**0.33**
M.A: EA	Local No: 60009 Sens.: 15.4 B/full: 760.0m^3s^{-1}													
F.A.R: SP	Level: 55m UE: <.01 FAI: 0.995													
Comment: Flat V Crump profile weir. Channel width: 13.7m. Llyn Y Fan Fach in headwaters. Flows available from 1970. No dmfs 1991-1993 as station being rerated. # Geology: Old Red S'st at source; Silurian in middle section; Ordovician in lower reaches. Valley extensively covered with alluvium. Agricultural land use with grazing in higher reaches. Mostly within Brecon Beacons National Park.		1996	1595	91	1141	86	2.80	71.9	08/01	0.35	05/08	5.9	1.63	0.42
		1997	1592	91	1056	80	2.59	70.8	17/11	0.44	19/08	5.6	1.16	0.57
		1998	2311	131	1782	134	4.38	**364.0**	**22/10**	0.59	31/05	9.1	2.24	0.91
		1999	2066	118	1517	114	3.73	96.6	01/01	0.46	31/07	8.6	2.18	0.57
		2000	2369	135	1883	142	4.62	177.7	29/10	0.74	12/08	10.1	2.89	0.90
060012	**Twrch at Ddol Las** C.A: 20.7 km^2	**70..95**	**1627**		**1054**		**0.69**	**28.9**	**27/12 1979**	**>0.00**	**27/08 1976**	**1.7**	**0.37**	**0.04**
M.A: EA	Local No: 60012 Sens.: 32.2 B/full: 36.0m^3s^{-1}													
F.A.R: N	Level: 151m UE: <.01 FAI: 1.000													
Comment: Velocity-area station. Channel width 4.65m. # Geology: Lower Silurian shales, grits and mudstones, with no Drift cover except for peat at highest altitude in extreme north. Entirely rural catchment in southern Cambrian Mountains, forested in part.		1996	1360	84	701	67	0.46	8.1	28/10	0.01	05/08	1.3	0.21	0.02
		1997	1416	87	706	67	0.46	9.6	19/02	0.02	19/08	1.3	0.15	0.03
		1998	1959	120	1125	107	0.74	23.6	22/10	0.03	31/05	1.9	0.33	0.06
		1999	1900	117	1377	131	0.90	13.7	24/12	0.03	30/07	2.2	0.55	0.05
		2000	2141	132	1670	158	1.09	19.2	29/10	0.09	15/05	2.7	0.69	0.17
060002	**Cothi at Felin Mynachdy** C.A: 297.8 km^2	**61..95**	**1645**		**1191**		**11.25**	**290.6d**	**18/10 1987**	**0.22**	**31/07 1984**	**26.1**	**6.66**	**0.93**
M.A: EA	Local No: 60002 Sens.: 11.0 B/full: 160.0m^3s^{-1}													
F.A.R: N	Level: 16m UE: <.01 FAI: 0.998													
Comment: Velocity-area station. Straight reach and natural rock control. Channel width: 20m. Stable section. Effectively a natural catchment. # Geology: mainly Silurian with Ordovician along SE boundary. Soils have permeable substrate. Upland pastures, livestock and dairy farming below. Significant forest cover (17%).		1996	1423	87	984	83	9.27	115.8	28/10	0.69	05/08	24.6	5.01	0.90
		1997	1441	88	985	83	9.30	118.4	17/02	0.96	23/04	23.8	3.67	1.14
		1998	1990	121	1625	136	15.35	**308.3**	**22/10**	0.98	31/05	34.9	7.72	1.81
		1999	1832	111	1428	120	13.49	149.7	24/12	0.49	01/08	34.6	7.50	0.90
		2000	2169	132	1773	149	16.70	219.9	30/10	1.33	27/07	38.1	9.07	1.98
060010	**Tywi at Nantgaredig** C.A: 1090.4 km^2	**58..95**	**1574**		**1109**		**38.33**	**1200.0**	**19/10 1987**	**1.06**	**06/08 1989**	**90.2**	**23.59**	**3.81**
M.A: EA	Local No: 60010 Sens.: 6.2													
F.A.R: RP	Level: 8m UE: <.01 FAI: 0.983													
Comment: Flat V weir (1:20) set in Crump profile flanking section. Shoaling d/s influences modular range; calibration based on gaugings. Channel width: 43m. High flows measured u/s - 60001 from which all pre-74 flows derive. Llyn Brianne in headwaters regulates flow down to major abstraction u/s of station (but d/s of 60001) and may be detected in hydrograph. # Geology: Ordovician and Silurian with Old Red Sandstone on southern boundary. Peaty soils in headwaters. Alluvium in valleys. Upper catchment mostly hill farming with some livestock and dairying at lower levels. Forest:17%.		1996	1383	88	933	84	32.15	251.1	28/10	2.89	21/09	75.7	18.87	4.22
		1997	1429	91	933	84	32.25	265.5	17/02	4.40	01/02	81.9	13.41	5.65
		1998	2022	128	1666	150	57.62	398.7	23/10	8.76	30/05	130.5	36.31	11.37
		1999	1874	119	1491	134	51.54	298.8	15/01	3.24	11/09	128.3	35.02	6.15
		2000	2142	136	1686	152	58.15	376.8	30/10	4.72	12/08	135.4	38.42	7.26
060006	**Gwili at Glangwili** C.A: 129.5 km^2	**68..95**	**1628**		**1180**		**4.85**	**184.5**	**01/12 1992**	**0.15**	**28/08 1976**	**11.2**	**2.89**	**0.41**
M.A: EA	Local No: 60006 Sens.: 11.8 B/full: 370.0m^3s^{-1}													
F.A.R: PEIN	Level: 8m UE: <.01 FAI: 1.000													
Comment: Velocity-area station; stable section. Channel width: 15.5m. Public water supply and agricultural abstractions and effluent returns have minimal impact on flow records. # Geology: Ordovician and Silurian. Mainly dairy farming, rural area. Forest: 18%. Soils generally have permeable substrate.		1996	1455	89	988	84	4.05	55.3	20/10	0.33	04/08	10.4	2.29	0.41
		1997	1561	96	1049	89	4.31	126.0	17/11	0.45	02/05	10.2	2.05	0.61
		1998	2107	129	1717	146	7.05	**208.1**	**24/10**	0.63	05/06	15.9	3.73	0.85
		1999	1789	110	1478	125	6.07	92.9	24/12	0.43	01/08	15.0	3.87	0.67
		2000	2244	138	1943	165	7.96	147.2	29/10	0.94	06/08	18.3	4.61	1.35
060003	**Taf at Clog-y-Fran** C.A: 217.3 km^2	**65..95**	**1426**		**1061**		**7.31**	**101.0**	**25/08 1986**	**0.18**	**21/08 1984**	**16.5**	**4.73**	**0.73**
M.A: EA	Local No: 60003 Sens.: 10.2 B/full: 50.0m^3s^{-1}													
F.A.R: N	Level: 7m UE: <.01 FAI: 0.999													
Comment: Velocity-area station. Overspills during flood discharges. Channel width 13.9m. Natural catchment. # Geology: Ordovician with some narrow bands of igneous rock. Old Red S'st and alluvium deposits in S. Mainly rural - predominantly dairy farming. Soils have permeable substrate.		1996	1241	87	970	91	6.67	48.7	14/01	0.58	22/09	16.3	4.40	0.80
		1997	1465	103	1131	107	7.80	56.6	18/11	1.48	02/05	16.5	4.77	1.86
		1998	1742	122	1454	137	10.02	56.8	22/10	2.17	05/06	21.1	6.34	2.58
		1999	1486	104	1199	113	8.26	55.7	20/12	1.23	02/08	19.1	5.56	1.57
		2000	1804	127	1560	147	10.72	58.1	30/10	1.71	11/08	24.5	6.61	1.87
060004	**Dewi Fawr at Glasfryn Ford** C.A: 36.7 km^2	**69..95**	**1486**		**1070**		**1.24**	**23.4**	**01/11 1977**	**0.01**	**21/08 1995**	**3.0**	**0.85**	**0.11**
M.A: EA	Local No: 60004 Sens.: 34.9 B/full: 20.0m^3s^{-1}													
F.A.R: E	Level: 10m UE: <.01 FAI: 1.000													
Comment: Velocity-area station. Concrete ford d/s acts as a bed control. Discontinued in 1982, reinstated in Apr 1990. # Mainly rural catchment with dairy farming.		1996	1369	92	966	90	1.12	12.1	24/11	0.06	21/09	2.7	0.77	0.11
		1997	1535	103	1094	102	1.27	18.7	17/11	0.16	02/05	3.0	0.67	0.22
		1998	1849	124	1619	151	1.88	19.7	24/10	0.24	03/09	4.3	1.11	0.32
		1999	1641	110	1245	116	1.45	17.8	24/12	0.06	03/08	3.5	0.92	0.15
		2000	1957	132	*1489*	139	1.73					3.8	1.02	0.26
061002	**Eastern Cleddau at Canaston Bridge** C.A: 183.1 km^2	**60..95**	**1443**		**1037**		**6.02**	**205.7**	**25/08 1986**	**0.59**	**22/07 1970**	**13.2**	**3.83**	**1.00**
M.A: EA	Local No: 61002 Sens.: 14.7 B/full: 85.0m^3s^{-1}													
F.A.R: SRPE	Level: 5m UE: <.01 FAI: 0.966													
Comment: Velocity-area station; artificial control installed in 1974. Channel width: 17.4m. Impounding reservoir for PWS in upper catchment regulates the river down to the gauging station. # Geology: mainly Ordovician with bands of igneous rock in the northern half of the catchment. Some ORS on southern boundary. Mainly dairy farming in hilly rural area. Soils mainly have permeable substrate.		1996	1271	88	885	85	5.13	54.0	28/11	0.94	23/09	11.6	3.55	1.09
		1997	1530	106	1081	104	6.28	111.9	22/11	1.37	02/05	12.9	3.40	1.51
		1998	1795	124	1402	135	8.14	98.4	03/01	1.48	01/06	16.8	5.15	2.12
		1999	1503	104	1004	97	5.83	71.1	03/01	1.12	29/07	13.6	3.78	1.30
		2000	1874	130	1298	125	7.51	87.7	11/12	0.99	23/07	17.0	4.58	1.19
061001	**Western Cleddau at Prendergast Mill** C.A: 197.6 km^2	**65..95**	**1296**		**851**		**5.33**	**101.1**	**12/06 1993**	**0.30**	**09/09 1976**	**11.8**	**3.70**	**0.69**
M.A: EA	Local No: 61001 Sens.: 5.2 B/full: 60.0m^3s^{-1}													
F.A.R: PEI	Level: 4m UE: <.01 FAI: 0.997													
Comment: Velocity-area station. Tidally affected but edited out. This station has been merged with 61004 (Redhill) to produce a continuous record, held as 61001. (Oct 65 - Dec 73 and Jun 90 - present data from 61001; Jan 74 - May 90 data from 61004.) # Geology: Ordovician with igneous intrusions. Natural catchment in rural area. Mainly dairy farming, some arable in lower ares. Soils in northern hills have impermeable substrata - seasonally wet. Soils in lower (southern) area have permeable substrates.		1996	1150	89	686	81	4.29	35.3	28/11	0.61	22/09	9.5	3.18	0.72
		1997	1370	106	859	101	5.38	53.8	17/11	1.53	02/06	10.4	3.36	1.69
		1998	1475	114	997	117	6.25	52.6	03/01	1.08	30/08	13.6	3.87	1.29
		1999	1325	102	850	100	5.33	40.8	03/01	0.62	21/08	12.7	3.73	0.79
		2000	1611	124	1241	146	7.76	57.0	07/12	0.77	12/09	17.6	5.13	1.25

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
061003 **Gwaun at Cilrhedyn Bridge** C.A: 31.3 km^2	**69..95**	**1532**		**1119**		**1.11**	**32.5**	**11/06**	**0.06**	**27/08**	**2.4**	**0.79**	**0.16**
M.A: EA Local No: 61003 Sens.: 18.5 B/full: 25.0 m^3s^{-1}								**1993**		**1976**			
F.A.R: N Level: 70m UE: <.01 FAI: 1.000													
Comment: Velocity-area station in straight reach (width: 7.0m). Natural steep-sided catchment - very responsive. Treat data with caution, under review; station designated as flood warning only from 2000. # Geology: Ordovician with intrusions of igneous rock. Mainly dairy farming in lower areas. Livestock on hills. Forest: 7%. 100% within Pembrokeshire Coast National Park. Peaty soils on hills, seasonally wet. In lower areas, soils have permeable substrate.	1996	1455	95	1136	102	1.12	11.0	13/01	0.28	04/08	2.3	0.86	0.31
	1997	1679	110	1254	112	1.24	25.7	17/11	0.37	02/05	2.2	0.86	0.46
	1998	1955	128	1456	130	1.44	25.4	02/01	0.37	31/05	2.8	0.99	0.45
	1999	1617	106	1169	104	1.16	18.5	03/01	0.17	24/07	2.5	0.88	0.25
	2000	2099	137	1689	151	1.67	**33.8**	**07/12**	0.33	30/08	3.4	1.07	0.42
062001 **Teifi at Glan Teifi** C.A: 893.6 km^2	**59..95**	**1355**		**1003**		**28.41**	**448.8**	**18/10**	**0.73**	**25/08**	**64.7**	**18.53**	**2.99**
M.A: EA Local No: 62001 Sens.: 9.4 B/full: 210.0 m^3s^{-1}								**1987**		**1976**			
F.A.R: SP Level: 5m UE: <.01 FAI: 0.995													
Comment: Velocity-area station. Straight reach (width: 35m), natural control. Flood flows spill over right bank. PWS impounding reservoirs in upland area where there is mostly hill farming. Tregaron bog (10 sq.km.) has partial effect on flows; sensibly natural regime. # Geology: mainly Ordovician and Silurian deposits. Dairy farming predominates in south. Forest: 5%. Peaty soils on hills, seasonally wet. Apart from Tregaron bog, most of the lower areas have soils with permeable substrate.	1996	1197	88	796	79	22.50	196.4	08/01	2.28	05/08	59.7	14.03	2.98
	1997	1310	97	836	83	23.70	225.1	18/11	4.22	23/04	52.7	11.92	5.10
	1998	1706	126	1301	130	36.87	256.2	24/10	5.55	01/06	88.9	21.96	7.78
	1999	1600	118	1182	118	33.51	202.2	24/12	2.66	02/08	79.0	22.59	4.08
	2000	1893	140	1521	152	42.99	309.9	30/10	5.96	13/09	99.8	25.90	7.23
063004 **Ystwyth at Cwm Ystwyth** C.A: 32.1 km^2	**84..95**	**2060**		**1881**		**1.91**	**56.4**	**21/03**	**0.05**	**21/08**	**4.7**	**0.98**	**0.18**
M.A: EA Local No: 63004 Sens.:								**1992**		**1995**			
F.A.R: Level: 199m UE: FAI:													
Comment: Flat V weir with vertical side walls, channel width 13m. # Geology: mainly Silurian shales and grits. Upper reaches of the catchment are mainly used for sheep farming and forestry. There are numerous disused lead and zinc mines within the catchment.	1996	1774	86	1544	82	1.57	39.4	31/10	0.11	23/09	3.9	0.84	0.15
	1997	1841	89	1585	84	1.61	27.9	28/11	0.16	23/04	3.8	0.81	0.21
	1998	2685	130	2488	132	2.53	42.4	06/03	0.18	31/05	5.9	1.51	0.40
	1999	2497	121	2271	121	2.31	47.2	01/03	0.07	01/08	5.4	1.22	0.19
	2000	2749	133	2755	146	2.80	33.6	30/01	0.21	30/07	7.1	1.63	0.35
063001 **Ystwyth at Pont Llolwyn** C.A: 169.6 km^2	**63..95**	**1493**		**1100**		**5.92**	**210.4**	**12/12**	**0.11**	**17/08**	**14.0**	**3.39**	**0.55**
M.A: EA Local No: 63001 Sens.: 13.8 B/full: 71.0 m^3s^{-1}								**1964**		**1994**			
F.A.R: N Level: 12m UE: <.01 FAI: 0.990													
Comment: Velocity-area station (channel width: 16m). Records from 1963, with bed control installed in 1973. Floods spill over right bank. Discharges from lead mines. Post-1985 flows below 3 m^3s^{-1} are unreliable due to blockage of lower inlet pipe. Channel re-graded and weir refurbished 21 - 27/09/98 (dmfs estimated by IH), new rating produced. # Geology: Silurian deposits. Mainly upland area with hill farming. Some livestock at lower levels. Forest 18%. Peaty soils in eastern hills, seasonally wet. Most of western catchment has soils with permeable substrata.	1996	1235	83	814	74	4.37	84.1	31/10	0.46	05/08	9.9	2.73	0.62
	1997	1340	90	869	79	4.67	91.8	28/11	0.65	24/04	10.2	2.60	0.89
	1998	1877	126	1442	131	7.76	111.5	06/03	0.83	31/05	16.9	4.62	1.43
	1999	1801	121	1450	132	7.80	109.5	02/03	0.34	01/08	19.6	4.03	0.65
	2000	2053	138	1757	160	9.42	112.4	29/10	0.85	30/07	22.9	5.81	1.20
064006 **Leri at Dolybont** C.A: 47.2 km^2	**60..95**	*1503*		**792**		**1.18**	**52.4**	**05/08**	**0.02**	**21/06**	**3.0**	**0.69**	**0.04**
M.A: EA Local No: Sens.: 51.2 S/full: 126.0 m^3s^{-1}								**1973**		**1970**			
F.A.R: S Level: 15m UE: <.01 FAI: 0.983													
Comment: A 10m wide single crest Crump profile weir in a straight floodbanked reach. Wing walls contain flows to high levels although rating has not been checked beyond medium flows. A small abstraction from Craig-y-Pistyll reservoir. # The catchment is predominantly moorland on impervious Silurian rocks.	1996	1330	88	994	126	1.48	18.1	31/10	0.35	05/08	3.1	1.02	0.43
	1997	1347	90	884	112	1.32	18.5	21/06	0.27	17/06	2.6	0.94	0.31
	1998	1981	132	1436	181	2.15	29.7	23/10	0.26	05/06	4.2	1.48	0.42
	1999	1802	120	1258	159	1.88	21.1	02/03	0.24	01/08	4.2	1.20	0.31
	2000	2084	139	1588	201	2.37	25.9	29/10	0.38	30/07	5.0	1.82	0.50
064001 **Dyfi at Dyfi Bridge** C.A: 471.3 km^2	**62..95**	**1890**		**1518**		**22.68**	**580.5**	**12/12**	**0.31**	**28/08**	**53.6**	**12.76**	**1.98**
M.A: EA Local No: Sens.: 8.1 B/full: 500.0 m^3s^{-1}								**1964**		**1976**			
F.A.R: N Level: 6m UE: <.01 FAI: 0.995													
Comment: A 40m wide river section controlled by the invert and arches of the historical Dyfi road bridge d/s. A good stable section although records in early years are marred by substantial engineering works carried out on the bridge. # A natural, largely moorland catchment on Silurian rocks. River alluvium deposits in the floodplain.	1996	1476	78	1167	77	17.39	293.7	31/10	1.28	27/07	41.5	9.50	1.69
	1997	1615	85	1218	80	18.20	276.4	17/02	1.52	19/08	46.0	10.12	2.61
	1998	2342	124	2038	134	30.46	354.2	06/03	2.33	31/05	68.4	17.43	5.20
	1999	2223	118	1921	127	28.71	324.9	02/03	1.27	01/08	72.7	15.55	2.65
	2000	2491	132	2368	156	35.29	338.8	29/10	4.21	30/07	76.7	24.79	5.90
064002 **Dysynni at Pont-y-Garth** C.A: 75.1 km^2	**66-95**	**2168**		**1860**		**4.43**	**121.3**	**21/11**	**0.19**	**07/09**	**9.5**	**3.04**	**0.58**
M.A: EA Local No: Sens.: 14.9 B/full: 170.0 m^3s^{-1}								**1980**		**1976**			
F.A.R: N Level: 2m UE: <.01 FAI: 0.952													
Comment: Weir constructed in 1997; station re-rated from Oct 1997. Following reconstruction (involved removing sheet-piling) station is more vulnerable to tidal influence, but allowed for in the stage-discharge conversion. Difficult to gauge at high flows. Recent flows should be treated with caution. Before April 1997: 40m wide section (between floodbanks) controlled by sheet piling d/s in straight channel. Insensitive at low flows; due to flashy response. # Natural flow regime arising from volcanic rocks with much outcropping. Tal-y-Llyn (southernmost ribbon lake in Britain) lies within catchment.	1996	1736	80	1448	78	3.44	45.0	31/10	0.46	23/09	7.4	2.04	0.70
	1997	1939	89										
	1998	2671	123	2512	135	5.98	64.4	03/03	0.65	31/05	12.4	4.25	1.02
	1999	2355	109	2417	130	5.76	*41.0*	*01/10*	1.62	01/08	11.5	4.36	2.14
	2000	2659	123	2499	134	5.94	71.1	29/10	1.30	15/05	12.5	3.94	1.46
065001 **Glaslyn at Beddgelert** C.A: 68.6 km^2	**61..95**	**3067**		**2604**		**5.66**	**141.0**	**18/12**	**0.04**	**09/07**	**13.2**	**3.27**	**0.55**
M.A: EA Local No: Sens.: 12.8 B/full: 100.0 m^3s^{-1}								**1993**		**1973**			
F.A.R: SH Level: 33m UE: <.01 FAI: 0.909													
Comment: A 20m wide river section rated by c/m and, in the past, by dilution gauging. Rating tends to be insensitive at low flows due to subtle movements in the natural bed control d/s. Large amount of gravel removed in August 2001, rating updated. High flow gauging restricted to peaks and troughs because of rapid water level changes. Station bypassed at high flows. Flows in 2000 under review. Lakes (Dinas and Gwynant) and HEP discharge from the higher Llyn Llydaw marginally affect records. # Catchment drains southern flanks of Snowdonia with much bare rock exposure (impermeable Ordovician volcanics).	1996	2354	77	2071	80	4.49	83.2	31/10	0.46	05/02	10.4	2.49	0.69
	1997	2745	90	2741	105	5.96	89.3	17/02	0.46	12/07	14.4	3.57	0.88
	1998	3490	114	3093	119	6.73	90.8	03/03	0.23	31/05	14.9	4.38	0.64
	1999	3067	100	2898	111	6.30	92.8	05/01	0.36	31/07	14.4	4.06	0.89
	2000	3764	123	4202	161	9.11	104.6	11/01	0.70	25/07	20.0	6.13	1.38
065007 **Dwyfawr at Garndolbenmaen** C.A: 52.4 km^2	**75..95**	**2071**		**1509**		**2.51**	**81.6**	**01/10**	**0.02**	**20/08**	**5.7**	**1.54**	**0.26**
M.A: EA Local No: Sens.: 11.9								**1987**		**1984**			
F.A.R: SRP Level: 86m UE: <.01 FAI: 0.969													
Comment: A compound Crump profile weir with dividing walls separating the 6.5m wide lower crest from two flanking crests each 5m wide. Station built as the control point for the Cwmystradllyn Reservoir/Afon Dwyfawr regulation scheme. Consequently not intended for high flow gauging and in fact bypassed at flows >10 year return period. # The catchment is mainly steep and with much bare rock of Lower Palaeozoic age.	1996	1660	80	1146	76	1.90	33.6	24/11	0.25	18/05	4.1	1.06	0.31
	1997	1930	93	1467	97	2.44	46.3	29/11	0.26	05/06	5.9	1.36	0.35
	1998	2293	111	1959	130	3.26	42.1	03/03	0.40	01/06	7.0	2.27	0.53
	1999	2020	98	1660	110	2.76	33.9	05/01	0.39	01/08	6.1	1.95	0.54
	2000	2620	127	2343	155	3.88	54.0	26/10	0.35	14/05	9.0	2.43	0.54
065005 **Erch at Pencaenewydd** C.A: 18.1 km^2	**73-95**	**1409**		**1042**		**0.60**	**25.0**	**18/10**	**0.04**	**27/08**	**1.3**	**0.40**	**0.09**
M.A: EA Local No: Sens.: 25.6 S/full: 75.8 m^3s^{-1}								**1987**		**1976**			
F.A.R: N Level: 56m UE: <.01 FAI: 0.991													
Comment: A 6m wide Crump profile weir with high wing walls containing wide range of flows. Check gauged up to medium flows. The oustanding peak flow in August 2000 is estimated (but was contained within the structure) - and resulted from a localised but very intense thunderstorm. # A typical impervious lowland catchment on the Lleyn peninsula covered with Boulder Clay.	1996	1310	93	893	86	0.51	9.2	24/11	0.12	13/10	1.0	0.36	0.13
	1997	1365	97	860	83	0.49	13.2	28/11	0.14	04/06	1.1	0.31	0.16
	1998	1565	111	1240	119	0.71	8.3	24/10	0.17	30/05	1.5	0.51	0.20
	1999	1433	102	1029	99	0.59	6.6	20/01	0.11	30/07	1.2	0.41	0.13
	2000	1946	138	1727	166	0.99	**63.0**	**21/08**	0.13	29/07	2.2	0.54	0.17
065004 **Gwyrfai at Bontnewydd** C.A: 47.9 km^2	**70..95**	**2222**		**1493**		**2.27**	**47.3**	**21/03**	**0.06**	**07/10**	**5.2**	**1.47**	**0.29**
M.A: EA Local No: Sens.: 17.1 S/full: 126.0 m^3s^{-1}								**1981**		**1972**			
F.A.R: SP Level: 31m UE: <.01 FAI: 0.868													
Comment: A 10m wide single crest Crump profile weir containing flows to high levels. Check gauging suggests some (constant) loss due to inadequate cutoffs; hence low flows affected. Significant abstraction from Llyn Cwellyn reservoir u/s. # A steep and typically Snowdonian catchment; Lower Palaeozoic geology.	1996	1755	79	981	66	1.49	14.9	28/10	0.17	20/09	4.2	0.73	0.23
	1997	2018	91	1314	88	2.00	18.0	03/09	0.29	19/08	5.3	1.04	0.34
	1998	2392	108	1710	115	2.60	15.7	03/03	0.32	31/05	5.7	1.95	0.41
	1999	2319	104	1619	108	2.46	22.3	05/01	0.23	31/07	5.3	1.73	0.32
	2000	2752	124	2046	137	3.10	27.9	12/01	0.30	24/07	7.2	1.99	0.46

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
065008	**Nant Peris at Tan-Yr-Alt** C.A: 12.2 km^2	**82..95**	**3394**		**3071**		**1.19**	**49.0**	**11/09 1987**	**0.02**	**11/08 1995**	**2.9**	**0.54**	**0.09**
M.A: EA	Local No: Sens.:	1996	3160	93	2334	76	0.90	28.8	28/09	0.05	23/09	2.3	0.38	0.08
F.A.R:	Level: m UE: FAI:	1997	3505	103	3164	103	1.22	37.5	17/02	0.06	07/01	3.3	0.52	0.08
Comment: Velocity-Area station.		1998	4401	130	3653	119	1.41	41.2	20/10	0.09	31/05	3.5	0.78	0.14
		1999	3885	114	3571	116	1.38	41.6	04/11	0.08	18/06	3.5	0.73	0.11
		2000	4711	139	4614	150	1.78	45.5	27/09	0.10	15/05	4.4	0.99	0.15
065006	**Selont at Pebllg Mill** C.A: 74.4 km^2	**76..95**	**2348**		**1968**		**4.64**	**75.7**	**18/10 1987**	**0.16**	**25/08 1995**	**10.4**	**3.12**	**0.63**
M.A: EA	Local No: Sens.: 5.5													
F.A.R: H	Level: 19m UE: <.01 FAI: 0.854	1996	1881	80	1543	78	3.63	34.4	28/10	0.28	23/09	9.3	1.89	0.57
Comment: A rated river section in a straight reach which has not yet been bypassed. Control provided by a roughly Crump profile shaped structure originally built as part of investigations prior to construction of the Dinorwic pumped storage scheme, which very marginally affects the record. Treat data with caution, under review. # A steep catchment with much bare rock surface. Contains two large ribbon lakes, Padarn and Peris, the latter acting as the lower reservoir of the Dinorwic scheme.		1997	2197	94	1943	99	4.58	40.6	17/02	0.44	20/08	11.7	2.34	0.69
		1998	2595	111	2385	121	5.63	37.8	20/10	0.62	01/06	13.0	4.11	1.13
		1999	2535	108	2399	122	5.66	40.7	05/11	0.46	17/07	12.6	3.76	0.96
		2000	2956	126	2988	152	7.03	48.5	12/01	0.62	25/07	16.0	4.57	1.00
066011	**Conwy at Cwm Llanerch** C.A: 344.5 km^2	**64..95**	**2188**		**1667**		**18.21**	**509.7**	**12/12 1964**	**0.32**	**30/07 1984**	**43.9**	**8.74**	**1.24**
M.A: EA	Local No: Sens.: 11.9 B/full: 390.0m^3s^{-1}													
F.A.R: P	Level: 7m UE: <.01 FAI: 0.980	1996	1656	76	1284	77	13.98	364.1	05/11	0.57	23/09	36.6	6.08	0.97
Comment: A 50m wide river section requiring frequent recalibration (current meter) due to shifting bed control. Record is very important in Conwy valley flood forecasting so much effort to ensure rating is kept accurate. Some bypassing and u/s overbank storage at very high flows. At such times water is diverted by means of leats into Llyn Conwy. # The catchment is mainly mountainous and composed of volcanic rocks.		1997	1889	86	1610	97	17.59	410.8	17/02	0.94	19/08	50.2	8.13	1.73
		1998	2453	112	2224	133	24.30	378.2	03/03	1.68	31/05	55.5	14.39	3.63
		1999	2468	113	2225	133	24.31	381.9	05/01	1.08	31/07	60.0	12.71	2.08
		2000	2793	128	2616	157	28.50	385.2	27/02	2.06	27/07	64.1	17.27	3.48
066005	**Clwyd at Ruthin Weir** C.A: 95.3 km^2	**71..95**	**961**		**447**		**1.35**	**19.0**	**29/01 1990**	**0.01**	**18/08 1976**	**3.5**	**0.81**	**0.07**
M.A: EA	Local No: Sens.: 82.5 S/full: 39.0m^3s^{-1}													
F.A.R:	Level: 51m UE: <.01 FAI: 0.993	1996	804	84	339	76	1.02	15.6	25/11	0.04	19/08	2.4	0.63	0.06
Comment: Non-standard 14m wide concrete weir with central low flow notch (short trapezoidal flume) leading to fish passes. Levels recorded 14m u/s in float well against left bank. Hydraulic continuity between g/w and streamflow along part of Afons Clywd and Hesbin. # Upper Clwyd rises in area of impermeable Ordovician and Silurian rocks, with patchy Boulder Clay cover.		1997	898	93	334	75	1.01	9.7	19/02	0.06	03/10	2.6	0.54	0.09
		1998	1159	121	559	125	1.69	18.6	03/03	0.14	22/08	4.4	0.91	0.21
		1999	1269	132	634	142	1.92	16.8	29/09	0.06	31/07	5.2	1.22	0.11
		2000	1401	146	795	178	2.40	**24.4**	**06/11**	0.27	29/06	5.0	1.57	0.42
066004	**Wheeler at Bodfari** C.A: 62.9 km^2	**70..95**	**857**		**370**		**0.74**	**5.3**	**11/02 1977**	**0.17**	**06/09 1976**	**1.4**	**0.60**	**0.25**
M.A: EA	Local No: Sens.: 13.7 S/full: 8.1m^3s^{-1}													
F.A.R: N	Level: 55m UE: <.01 FAI: 0.995	1996	748	87	254	69	0.51	4.0	25/11	0.20	12/10	0.8	0.44	0.21
Comment: Single level Crump weir 3.034m wide, between vertical side walls. Immediately d/s of rectangular channel beneath disused railway bridge. Station refitted in June 1997, and new rating derived. # Geology: L'st in north; Silurian beneath and to south of river; all overlain by sand and gravel deposits.		1997	830	97	275	74	0.55	3.6	26/06	0.24	24/09	0.8	0.46	0.27
		1998	1051	123	473	128	0.94	4.9	12/09	0.32	07/09	1.8	0.82	0.36
		1999	1081	126	462	125	0.92	5.2	24/10	0.22	16/09	1.7	0.79	0.26
		2000	1253	146	651	176	1.29	**6.7**	**06/11**	0.44	14/09	2.8	0.94	0.50
066001	**Clwyd at Pont-y-Cambwll** C.A: 404.0 km^2	**59..95**	**919**		**482**		**6.17**	**81.5**	**26/09 1976**	**0.40**	**22/08 1976**	**14.2**	**3.86**	**0.95**
M.A: EA	Local No: Sens.: B/full: 50.0m^3s^{-1}													
F.A.R: RG	Level: 15m UE: <.01 FAI: 0.996	1996	762	83	351	73	4.49	53.8	26/11	0.75	19/08	8.8	3.12	0.90
Comment: VA station. Affected by weedgrowth (cleared as required and current meter gauging undertaken) and sand and gravel movement. Low flows augmented using gw (approx. 12% of Q95 flow). Flood discharges affected by floodplain storage in Vale of Clwyd u/s. Control stabilised in mid-1990s. Station refitted June-Aug 1997: no dmfs. Rerated from Aug 1997. # Headwaters rise in Silurian shales and grits of Denbigh Moors and Clwydian Hills, then flow across generally confined Triassic Sandstone aquifer (with artesian heads over large areas). Rural catchment with mixed land use: grouse moors to lowland dairy farming.		1997	872	95	371	77	4.76	35.5d	26/06	0.80	05/10	11.2	2.83	0.93
		1998	1107	120	596	124	7.63	52.3	04/03	1.08	22/08	18.6	4.48	1.35
		1999	1188	129	641	133	8.21	42.1	12/12	0.78	31/07	20.9	5.54	1.00
		2000	1349	147	848	176	10.83	76.4	06/11	1.77	28/06	24.1	7.05	2.45
066006	**Elwy at Pont-y-Gwyddel** C.A: 194.0 km^2	**73..95**	**1209**		**672**		**4.14**	**143.0**	**15/10 1976**	**0.16**	**06/09 1976**	**10.5**	**2.22**	**0.32**
M.A: EA	Local No: Sens.: 18.3													
F.A.R: SRP	Level: 88m UE: <.01 FAI: 0.981	1996	929	77	448	67	2.75	49.1	25/11	0.24	05/08	7.6	1.35	0.28
Comment: Twin arch bridge provides control at medium flow. 1m wide Crump weir blocks set in castellated manner within 10m wide archway to achieve low flow sensitivity. New rating from 01/08/97, data revised. Some bypassing at levels >2m. Low flows affected >10% by maintained residual flow of 0.2 m^3s^{-1} in Afon Aled from reservoirs which drain 6% of catchment. # Impermeable Silurian strata with shallow soil cover. Mainly sheep pastures. <10% forestry in valleys.		1997	1101	91	577	86	3.55	59.3	19/02	0.28	05/10	10.5	1.22	0.39
		1998	1337	111	814	121	5.01	74.4	27/10	0.54	31/05	12.4	2.52	0.69
		1999	1448	120	896	133	5.51	60.3	15/01	0.21	31/07	15.4	3.11	0.34
		2000	1639	136	1097	163	6.73	127.8	09/11	0.70	30/06	16.2	3.93	0.94
067018	**Dee at New Inn** C.A: 53.9 km^2	**69..95**	**1940**		**1783**		**3.05**	**92.8**	**18/11 1978**	**0.04**	**23/08 1976**	**7.9**	**1.43**	**0.23**
M.A: EA	Local No: Sens.: 18.9 B/full: 38.0m^3s^{-1}													
F.A.R: N	Level: 164m UE: <.01 FAI: 1.000	1996	1693	87	1369	77	2.33	72.0	05/11	0.14	23/09	6.3	1.02	0.17
Comment: Origional control based on a rough stone paved ford with stepping stones u/s to provide sensitivity at low flows. Formalised (between 04/98 and 04/99 - data infilled using 67/10)into a shallow V concrete ford with square blocks cast on the u/s base to mimic the adjusted configuration. The controls have been calibrated by current meter although station is by-passed at extreme flood flows (in excess of the annual flood). Data is used operationally for flood alleviation, flood warning and a daily naturalization indicator for upper Dee flows. # Mainly Ordovician rocks. Patchy superficial deposits otherwise no water-bearing strata. Rapidly responding catchment comprising mostly rough upland pasture.		1997	1778	92	1419	80	2.43	76.0	17/02	0.15	19/08	6.2	1.07	0.25
		1998	2483	128	2059	115	3.52	40.2d	06/03	0.28	31/05	8.0	1.96	0.53
		1999	2361	122	2742	154	4.69	*79.4*	*16/12*	0.14	01/08	11.9	2.01	0.28
		2000	2784	144	2439	137	4.16	79.0	29/10	0.30	30/07	9.8	2.31	0.51
067010	**Gelyn at Cynefail** C.A: 13.1 km^2	**66..95**	**2173**		**1623**		**0.67**	**37.2**	**01/01 1981**	**0.02**	**01/09 1976**	**1.7**	**0.28**	**0.06**
M.A: EA	Local No: Sens.: 20.4 S/full: 35.5m^3s^{-1}													
F.A.R: N	Level: 306m UE: <.01 FAI: 0.969	1996	1664	77	1212	75	0.50	14.1	05/11	0.04	18/08	1.4	0.19	0.05
Comment: Compound Crump profile weir. Station closed 1981 to 1987 inclusive. Fully operational since 1988. # Geology: impermeable Lower Ordovician volcanics with occasional heavily indurated shales. Drift cover minimal. Rapid runoff. Upland pasture, rural.		1997	1838	85	1393	86	0.58	17.0	17/02	0.05	16/08	1.6	0.23	0.08
		1998	2466	113	1910	118	0.79	18.5	03/03	0.08	30/05	1.9	0.41	0.11
		1999	2392	110	2032	125	0.84	21.1	16/12	0.06	31/07	2.2	0.36	0.08
		2000	2669	123	2419	149	1.00	11.1	02/03	0.09	29/07	2.6	0.52	0.11
067001	**Dee at Bala** C.A: 261.6 km^2	**57..95**	**1867**		**1541**		**12.78**	**198.2**	**04/12 1960**	**0.80**	**18/03 1962**	**29.6**	**7.84**	**2.34**
M.A: EA	Local No: Sens.: 10.0 B/full: 186.0m^3s^{-1}													
F.A.R: SR	Level: 159m UE: FAI:	1996	1555	83	1080	70	8.94	59.0	03/11	1.72	05/02	22.5	6.42	2.45
Comment: Original broad-crested weir modified in 1968 to triangular profile 1:1 u/s and 1:3.5 d/s. Gauged by wading and cableway with some hydraulic model tests also. May drown at about bankfull flows. Low flows controlled by Bala sluices about 750m u/s. These control flow from Llyn Tegid. Llyn Celyn also in catchment. # Thin soil cover over mostly Lower Ordovician rocks. The rapid response to rainfall is modified by the natural storage of Llyn Tegid. Mainly open moorland and sheep pastures with <10% forest.		1997	1649	88	1198	78	9.94	62.1	13/02	2.46	07/01	22.0	6.71	2.70
		1998	2259	121	2077	135	17.23	112.4	25/10	2.50	04/02	38.0	12.09	3.23
		1999	2221	119	1984	129	16.46	114.3	03/03	3.02	01/05	37.8	9.53	5.18
		2000	2549	137	2482	161	20.53	127.1	30/10	2.67	01/04	43.6	14.94	3.51
067028	**Celdiog at Llandrillo** C.A: 36.5 km^2	**78..95**	**1500**		**1132**		**1.31**	**29.7**	**07/12 1994**	**0.04**	**15/09 1990**	**3.3**	**0.70**	**0.10**
M.A: EA	Local No: Sens.:	1996	1404	94	998	88	1.15	19.4	11/02	0.10	18/08	3.0	0.66	0.12
F.A.R: N	Level: 155m UE: FAI:	1997	1353	90	992	88	1.15	23.8	19/02	0.14	19/08	3.3	0.50	0.18
Comment: Velocity-area station utilising a series of gravel traps as a control for low and medium flows only. Station converted to a level-only site in 2001. # Geology: Lower and Middle Ordovician mudstones and shales with outcrops of contemporaneous volcanic tuffs and agglomerates which provide rapid runoff rates and low baseflows.		1998	1845	123	1646	145	1.91	**32.9**	**27/10**	0.30	20/08	4.3	0.93	0.35
		1999	1778	119	1644	145	1.90	27.0	24/12	0.14	31/07	4.9	1.14	0.22
		2000	1991	133	1875	166	2.16	**49.9**	**05/11**	0.31	13/09	4.5	1.40	0.36

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
067006	**Alwen at Druid** C.A: 184.7 km^2	**60..95**	**1316**		**844**		**4.94**	**175.6**	**12/12 1964**	**0.33**	**07/07 1975**	**11.4**	**2.94**	**0.65**
M.A: EA	Local No: Sens.: 14.7 B/full: 100.0m^3s^{-1}													
F.A.R: SRPI	Level: 146m UE: <.01 FAI: 0.903													
Comment: Natural river section about 20m wide. Stable since last major flood in 1964. Some minor revisions of rating from time to time. Flows greater than 60 m^3s^{-1} are estimated. Bypassed during floods. Reservoirs control 15% of catchment. Llyn Brenig is within the catchment. # Catchment area changed in 1976 to exclude Llyn Bran (0.8 sq.km.). Peat cover (thick in places) over Boulder Clay on Ordovician/Silurian geology.		1996	1067	81	614	73	3.59	43.7	25/11	0.53	05/08	8.6	2.04	0.73
		1997	1190	90	656	78	3.84	59.4	17/02	0.58	04/10	10.0	1.90	0.81
		1998	1520	116	1129	134	6.61	82.3	03/03	0.97	31/05	15.1	3.61	1.22
		1999	1647	125	1261	149	7.39	103.8	29/09	0.75	14/09	19.1	4.12	0.92
		2000	1831	139	1311	155	7.66	120.6	29/10	0.81	31/03	16.3	5.26	1.09
067005	**Celriog at Brynkinalt Weir** C.A: 113.7 km^2	**56..95**	**1255**		**831**		**3.00**	**66.1**	**09/12 1965**	**0.14**	**26/08 1976**	**6.8**	**1.99**	**0.42**
M.A: EA	Local No: Sens.: 20.6 B/full: 350.0m^3s^{-1}													
F.A.R: N	Level: 64m UE: <.01 FAI: 1.000													
Comment: Compound broad-crested weir modified from original velocity-area site in 1969. Discharges > 15 m^3s^{-1} are estimated. Data prior to 1969 is suspect. Station refitted between June-Sept 1997; no flows, new rating thereafter. # Geology: Ordovician and Silurian strata overlain unconformably in E by Carboniferous L'st, Cefn-y-Fedw S'st and Coal Measures. River valleys are deeply incised. Soils are thin and peaty, supporting pasture for sheep grazing.		1996	1086	87	736	89	2.65	32.3	11/02	0.30	19/08	5.9	1.89	0.35
		1997	1160	92										
		1998	1483	118	1077	130	3.88	36.4	08/01	0.52	20/08	9.0	2.22	0.62
		1999	1525	122	1073	129	3.87	32.6	20/09	0.42	31/07	9.0	2.56	0.52
		2000	1675	133	1279	154	4.60	**94.4**	**05/11**	0.62	12/09	9.4	2.86	0.81
067015	**Dee at Manley Hall** C.A: 1019.3 km^2	**37..95**	**1402**		**958**		**30.96**	**665.4**	**14/12 1964**	**1.93**	**30/07 1949**	**70.9**	**19.15**	**5.49**
M.A: EA	Local No: Sens.: 5.4 S/full: 121.0m^3s^{-1}													
F.A.R: SRPI	Level: 25m UE: <.01 FAI: 0.936													
Comment: Asymmetrical compound Crump profile weir, checked by current metering. Drowns at flows above 200 m^3s^{-1}. Low flows maintained by releases from major river regulating reservoirs: Celyn and Brenig. Data prior to Feb 1970 is poorer quality - based on d/s Erbistock (67002, area: 1040.0 sq.km.) flow record. D/s of Bangor on Dee, flood attenuation in the lower Dee flood plain is notable. # Geology: 75% shales, slates, mudstones and palaeozoic grits; 25% extrusive igneous and Carboniferous rocks. 80% grazed open moorland, 12% forestry, remainder arable. Urban negligible.		1996	1184	84	714	75	23.02	159.3	12/02	7.14	08/02	52.0	14.53	8.78
		1997	1263	90	697	73	22.51	167.1	19/02	6.89	10/09	55.9	12.30	7.76
		1998	1659	118	1150	120	37.16	289.2	24/10	8.31	09/07	78.5	23.87	9.03
		1999	1709	122	1167	122	37.72	218.2	29/09	8.07	08/07	88.2	24.28	9.04
		2000	1911	136	1422	148	45.83	440.6	30/10	8.44	01/04	96.5	30.98	10.31
067025	**Clywedog at Bowling Bank** C.A: 98.6 km^2	**76-95**	**852**		**436**		**1.36**	**47.8**	**25/09 1976**	**0.20**	**25/08 1995**	**2.8**	**0.87**	**0.40**
M.A: EA	Local No: Sens.: 12.6													
F.A.R: GE	Level: 14m UE: .07 FAI: 0.990													
Comment: Simple Crump profile weir 6m wide which drowns at 8 m^3s^{-1}. Bypassed by flood flows of 10 year (or more) return period. 50% of low flow was treated effluent from Wrexham until 7/10/92 when this discharge was piped directly to the R. Dee. Mine drainage and abstraction in upper catchment. # Sand and gravel deposits (in central part of catchment) overlying Carboniferous strata. Much mining in the catchment which is >10% urban or industrial.		1996	739	87	290	67	0.90	10.6	10/02	0.21	18/08	1.9	0.60	0.23
		1997	820	96	296	68	0.92	16.7	26/06	0.27	09/08	1.7	0.58	0.32
		1998	980	115	462	106	1.44	21.9	04/01	0.28	19/08	3.2	0.88	0.32
		1999	1139	134	530	122	1.66	21.3	29/09	0.25	31/07	3.5	1.08	0.30
		2000	1153	135	592	136	1.84	28.0	06/11	0.40	13/09	3.7	1.14	0.49
067009	**Alyn at Rhydymwyn** C.A: 77.8 km^2	**65..95**	**986**		**282**		**0.69**	**66.1**	**09/12 1965**	**0.00**	**02/12 1995**	**1.9**	**0.01**	
M.A: EA	Local No: Sens.: B/full: 73.0m^3s^{-1}													
F.A.R:	Level: 121m UE: <.01 FAI: 0.988													
Comment: Trapezoidal flume in concrete trapezoidal channel. Discharge frequently zero due to flow entering swallow holes in limestone u/s of site. Data prior to 1968 suspect. # Geology: in the west impermeable Silurian rocks covered with Boulder Clay and Drift, to the east lies Carboniferous Limestone escarpment. Swallow holes frequent between Maeshafn and Rhydymwyn, substantial losses of river flow through percolation to mine discharge tunnels.		1996	800	81	173	61	0.43	9.0	25/11	0.00	04/02	1.2		
		1997	909	92	155	55	0.38	8.4	26/06	0.00	21/01	1.3		
		1998	1125	114	378	134	0.93	8.0	04/01	0.00	15/02	3.1	0.29	
		1999	1228	125	429	152	1.06	11.5	25/10	0.00	05/05	3.1	0.48	
		2000	1385	140	496	176	1.22	36.3	06/11	>0.00	21/03	3.1	0.42	
067008	**Alyn at Pont-y-Capel** C.A: 227.1 km^2	**65..95**	**917**		**326**		**2.35**	**59.1**	**25/09 1976**	**0.24**	**24/08 1976**	**5.5**	**1.31**	**0.47**
M.A: EA	Local No: Sens.: 16.1 S/full: 71.0m^3s^{-1}													
F.A.R: SEI	Level: 37m UE: .02 FAI: 0.991													
Comment: The divide wall of this (two part) asymmetrical compound Crump weir was lowered in 1986 as debris regularly blocked the lower part. Current meter calibration took place before and after. # Ill-defined catchment boundary to NE and SE. 25% Carboniferous Limestone. Major loss of water from upper 70 sq.km. in limestone and mine drainage tunnels. Extensive glacial deposits over Coal Measures.		1996	764	83	250	77	1.79	14.8	25/11	0.39	18/09	4.0	1.04	0.41
		1997	862	94	235	72	1.69	21.1	25/06	0.46	05/10	3.7	0.94	0.51
		1998	1072	117	437	134	3.15	25.5	03/03	0.51	19/08	7.6	2.04	0.59
		1999	1186	129	474	145	3.41	24.3	01/10	0.46	31/07	7.7	2.32	0.54
		2000	1295	141	559	171	4.02	58.9	06/11	0.69	13/09	8.9	2.36	0.85
067033	**Dee at Chester Suspension Bridge** C.A: 1816.8 km^2	94-95	1117		596		34.35	221.0	01/01 1995	3.45	18/12 1995	100.2	11.07	5.25
M.A: EA	Local No: Sens.:													
F.A.R:	Level: m UE: FAI:													
Comment: Ultrasonic gauge, 6 path (paths 5 and 6 used for high flows) installed in 1994. Superceded 67020 (non-standard weir, tidally affected) approx. 300m d/s. River channel approx. 40m wide. High flow performance under review. # Geology: upper catchment impermeable Lower Palaeozoic rocks with intermittent Drift cover. Below Llangollen R. Dee crosses Carboniferous Limestone escarpment and outcrops of Cefn-y-Fewd Sandstone, Coal Measures and Sherwood Sandstone, providing many artesian areas in the lower catchment.		1996	946	85	385	65	22.10	137.0	26/11	4.23	14/09	56.4	12.72	4.80
		1997	1024	92	390	65	22.47	145.0	25/02	3.83	21/07	61.5	10.23	4.83
		1998	1322	118	752	126	43.30	199.0	10/01	5.39	09/07	113.2	24.49	6.64
		1999	1403	126	775	130	44.66	*186.0*	*24/12*	4.92	09/07	117.2	25.85	5.97
		2000	1546	138	946	159	54.37	332.0	07/11	6.98	23/07	120.9	37.18	9.04
102001	**Cefni at Bodffordd** C.A: 22.3 km^2	**88..95**	**1029**		**529**		**0.37**	**15.6**	**31/03 1994**	**>0.00**	**09/08 1990**	**0.9**	**0.17**	**0.01**
M.A: EA	Local No: Sens.:													
F.A.R:	Level: m UE: FAI:													
Comment: Compound broad-crested weir rated at medium to high flows by current meter. Full range station - accumulation of debris may affect the intake in the summer/autumn. # Typical low-lying Angelsey catchment of impervious rocks overlain by thick Boulder Clay.		1996	819	80	373	71	0.26	5.7	24/11	0.01	22/09	0.7	0.14	0.01
		1997	964	94	443	84	0.31	*14.5*	*10/12*	0.03	19/08	0.8	0.11	0.03
		1998	1239	120	735	139	0.52	7.5	03/03	0.04	20/08	1.3	0.29	0.06
		1999	1172	114	610	115	0.43	8.5	12/01	0.02	01/08	1.0	0.24	0.03
		2000	1477	144	1047	198	0.74	**17.8**	**06/11**	0.02	26/07	1.8	0.31	0.03

Map 11: NORTH WEST



Area: 14,445 km^2

Average Rainfall (1961–90): 1201 mm

Gauging Station Register

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
068015	Gowy	Hudey	SJ 497624	49.0	VA	1970..00	728	246	482	478	00	46	78	0.38	0.00	10/78	7.9	.48	0.9	0.08
068020	Gowy	Bridge Trafford	SJ 448711	156.0	FV	1979–00	726	227	499	455	00	114	96	1.12	0.17	08/95	23.0	.45	2.5	0.20
068002 *	Gowy	Picton	SJ 443714	156.2	VA	1949..76	748	247	501	401	74	101	64	1.23	0.22	01/64	16.2	.52	2.5	0.25
068005	Weaver	Audlem	SJ 653431	207.0	TPVA	1953..00	740	243	497	412	00	108	64	1.59	0.07	08/76	20.6	.49	3.8	0.22
068004	Wistaston B	Marshfield Br	SJ 674552	92.7	VA	1957..00	752	326	426	572	66	133	96	0.96	0.14	09/96	11.7	.61	1.8	0.22
068001	Weaver	Ashbrook	SJ 670633	622.0	VA	1937..00	752	295	457	540	00	140	64	5.81	0.64	08/76	47.1	.53	13.2	1.15
068006 *	Dane	Hulme Walfield	SJ 845644	150.0	VA	1953..84	1043	500	543	941	54	289	74	2.38	0.23	06/75	51.1	.48	5.4	0.46
068003	Dane	Rudheath	SJ 668718	407.1	FVVA	1949..00	873	387	486	951	78	181	59	5.00	0.63	09/59	64.8	.54	11.0	0.92
068011 *	Arley Brook	Gore Farm	SJ 696799	36.5	FL	1975..82	828	387	441	414	78	256	75	0.45	0.01	08/76	7.4	.37	0.9	0.01
068007	Wincham Brk	Lostock Gralam	SJ 697757	148.0	MIS	1962..00	835	404	431	774	00	167	96	1.89	0.16	08/94	24.1	.51	4.0	0.27
069004 *	Etherow	Bottoms Res	SK 023971	78.2	TP	1945..81	1480	529	951	934	80	230	76	1.31	0.15	10/76		.40	2.9	0.29
069015	Etherow	Compstall	SJ 962908	156.0	C	1971..00	1317	624	693	1106	00	367	76	3.09	0.61	09/89	40.8	.52	6.8	0.73
069017	Goyt	Marple Bridge	SJ 964898	183.0	CC	1969..00	1146	644	502	956	00	388	96	3.74	0.49	08/76	48.3	.53	8.3	0.74
069041	Tame	Broomstair Br	SJ 938953	113.0	US	1974..00	1280	992	288	1470	00	616	76	3.55	0.74	09/90	57.3	.59	6.8	1.09
069027	Tame	Portwood	SJ 906918	150.0	MIS	1969..00	1189	864	325	1252	70	545	76	4.11	1.02	10/72	54.5	.58	7.9	1.38
069007	Mersey	Ashton Weir	SJ 772936	660.0	CB	1976–00	1133	590	543	985	00	401	96	12.34	2.45	07/84	172.7	.53	25.3	3.16
069001 *	Mersey	Irlam Weir	SJ 728936	679.0	CB	1921..78	1101	657	444	985	44	332	55	14.15	1.79	08/55	153.4	.56	27.9	3.84
069040	Irwell	Stubbins	SD 793188	105.0	VA	1976..00	1401	1041	360	1650	98			3.47			91.8	.43	8.2	0.57
069044	Irwell	Bury Ground	SD 800140	139.9	FVVA	1992..00	1154	537	617	1018	98	332	96	2.38	0.35	08/95		.49	4.7	0.43
069035 *	Irwell	Bury Bridge	SD 797109	155.0	VA	1976..98	1324	1028	296	1680	81	649	96	5.05	0.01	09/89	207.1	.33	12.0	0.23
069042	Ding Brook	Naden Reservoir	SD 850175	2.2	MIS	1982..00	1429	1032	397	1419	00	674	95	0.07	0.01	08/95		.44	0.2	0.01
069022	Irwell	Irwell Vale	SD 791201	101.0	VA	1998–00	1472	1033	439	1342	00	707	96	3.31	0.83	01/96			7.8	0.77
069023	Roch	Blackford Bridge	SD 807077	186.0	VA	1976–00	1258	847	411	1252	00	544	96	4.99	1.20	08/95	57.1	.51	10.3	1.47
069024	Croal	Farnworth Weir	SD 743068	145.0	B	1976–00	1327	661	666	980	81	394	96	3.04	0.44	08/95	56.9	.40	7.1	0.65
069003	Irk	Scotland Weir	SJ 841992	72.5	CB	1937..00	1043	779	264	1345	70	357	97	1.79	0.30	09/59	39.6	.53	3.5	0.41
069002	Irwell	Adelphi Weir	SJ 824987	559.4	B	1949..00	1269	1003	266	1718	54	697	59	17.79	2.75	06/51	228.7	.50	37.3	4.89
069039 *	Medlock	New Viaduct Str	SJ 863987	55.9	B	1949..76	1066	626	440	739	58	397	76	1.11	0.14	09/59		.38	2.5	0.17
069020	Medlock	London Road	SJ 849975	57.5	MIS	1975–00	1052	483	569	701	80	271	96	0.88	0.20	08/95	14.9	.53	1.7	0.24
069019	Worsley Brk	Eccles	SJ 753980	24.9	FL	1969..00	963	382	581	577	81	170	96	0.30	0.03	06/96	8.1	.48	0.6	0.06
069005	Glaze Brook	Little Woolden	SJ 685939	152.0	VA	1954..00	979	689	290	982	58	383	62	3.32	0.21	05/95		.52	6.9	0.75
069013	Sinderland B	Partington	SJ 726905	44.8	CC	1976–00	820	372	448	551	81	246	96	0.53	0.13	08/76	8.5	.56	1.1	0.16
069012	Bollin	Wilmslow	SJ 850815	72.5	CC	1976–00	945	548	397	800	00	332	96	1.26	0.35	08/76	12.8	.61	2.5	0.45
069008	Dean	Stanneylands	SJ 846830	51.8	CC	1976..00	959	477	482	834	00	248	96	0.78	0.09	07/76	9.4	.50	1.8	0.11
069006	Bollin	Dunham Massey	SJ 727875	256.0	VA	1955..00	889	527	362	959	00	336	59	4.28	0.65	09/59	40.3	.57	8.8	1.17
069037	Mersey	Westy	SJ 617877	2030.0	US	1986..00	1081	560	521	851	00	348	91	36.04	0.22	10/98		.57	85.7	9.08
069030	Sankey Brook	Causey Bridge	SJ 588922	154.0	VA	1977..00	909	537	372	723	81	370	91	2.62	0.44	08/77		.56	5.4	0.83
069031	Ditton Brook	Greens Bridge	SJ 457865	47.9	VA	1974..00	885	853	32	1322	00	629	85	1.29	0.27	08/76		.59	2.5	0.44
069032	Alt	Kirkby	SJ 392983	90.1	VA	1977..00	881	479	402	696	00	331	96	1.37	0.45	08/95		.55	2.8	0.49
069033 *	Alt	Sefton	SD 359012	100.0	VA	1954..75	*838*	727	111	865	74	480	55	2.31	0.82	06/60		.70	3.6	1.02
070001 *	Douglas	Rivington Res	SD 631119	39.4	MIS	1951..73	1276	307	969	800	67	119	53	0.38	0.10	07/56		.65	0.4	0.13
070003	Douglas	Wigan	SD 587061	55.3	VA	1977..00	1159	669	490	973	81	426	96	1.17	>0.00	07/94	16.4	.58	2.3	0.36
070002	Douglas	Wanes Blades Br	SD 476126	198.0	VA	1973..00	1045	636	409	1018	00	495	76	3.99	0.00	07/83	34.2	.53	8.3	1.11
070004	Yarrow	Croston Mill	SD 498180	74.4	MIS	1976–00	1037	794	243	1286	00	483	96	1.87	0.38	08/76	33.9	.44	4.1	0.49
070005	Lostock	Littlewood Br	SD 497197	56.0	VA	1976..00	1031	729	302	1090	81	443	85	1.29	0.30	05/85	17.5	.48	2.5	0.33
071011	Ribble	Arnford	SD 839556	204.0	FV	1966..00	1504	1125	379	1520	00	710	96	7.28	0.22	08/95	120.3	.25	19.3	0.44
071006	Ribble	Henthorn	SD 722392	456.0	CB	1968–00	1370	948	422	1471	00	613	96	13.71	0.55	08/95	226.9	.30	34.6	1.04
071005 *	Bottoms Beck	Bottoms Beck	SD 745565	10.6	FL	1960–74	1543	1032	511	1318	67	735	69	0.35	0.03	06/70	15.5	.21	0.9	0.03
071002	Hodder	Stocks Reservoir	SD 719546	37.0	B	1936..00	1715	416	1299	891	67		96	0.49	0.00	10/00		.19	0.5	
071003 *	Croasdale	Croasdale flume	SD 706546	10.4	FL	1957–74	1864	1201	663	1568	67	873	59	0.40	0.05	09/59	13.3	.36	0.9	0.07
071015	Dunsop	Footholme Flume	SD 653529	25.0	FL	1996–00		1227		1642	00	725	96	0.97	0.17	01/97		.24	2.6	0.12
071008	Hodder	Hodder Place	SD 704399	261.0	FV	1976–00	1648	1033	615	1595	00	599	96	8.55	0.66	08/76	209.8	.31	21.6	0.97
071010	Pendle Water	Barden Lane	SD 837351	108.0	FV	1971–00	1225	862	363	1304	80	500	96	2.95	0.32	08/95	72.8	.37	7.0	0.47
071004	Calder	Whalley Weir	SD 729360	316.0	FV	1963..00	1228	861	367	1232	00	573	96	8.63	1.57	08/76	153.1	.42	19.7	1.97
071009	Ribble	Jumbles Rock	SD 702376	1053.0	VA	1979–00	1415	1004	411	1452	00	617	96	33.51	3.27	08/95	594.9	.33	82.4	4.22
071001	Ribble	Samlesbury	SD 587314	1145.0	MIS	1960–00	1348	915	433	1381	00	598	96	33.23	2.64	07/84	610.1	.34	81.1	4.56
071013	Darwen	Ewood	SD 677262	39.5	VA	1976..00	1370	953	417	1299	80	680	96	1.19	0.29	08/76	30.6	.46	2.6	0.32
071014	Darwen	Blue Bridge	SD 565278	128.0	VA	1976..00	1231	1007	224	1436	00	696	96	4.09	1.27	07/84	112.0	.48	8.2	1.30
072016	Wyre	Scorton Weir	SD 501500	88.8	MIS	1967..00	1495	1261	234					3.55	0.00	08/68	92.8	.29	7.5	0.21
072008	Wyre	Garstang	SD 488447	114.0	FV	1967..00	1411	924	487	1475	00	571	71	3.34	0.19	08/76		.32	8.0	0.36
072007	Brock	U/S A6	SD 512405	32.0	B	1978–00	1431	863	568	1351	80	481	96	0.88	0.04	08/95		.34	2.1	0.07
072002	Wyre	St Michaels	SD 463411	275.0	FVVA	1963–00	1270	741	529	1217	00	448	96	6.46	0.24	08/76	145.4	.33	15.8	0.59
072014	Conder	Galgate	SD 461554	28.5	FVVA	1976..00	1231	764	467	1131	81	463	96	0.69	0.04	08/95	37.7	.35	1.7	0.06
072015	Lune	Lunes Bridge	NY 612029	141.5	MIS	1979..00	1712	1391	321	1881	00	865	96	6.24	0.28	07/84	247.3	.32	15.2	0.50
072005	Lune	Killington	SD 622907	219.0	CB	1969..00	1653	1456	197	2171	00	931	76	10.11	0.60	07/84	207.9	.32	24.9	0.82
072011	Rawthey	Brigg Flatts	SD 639911	200.0	VA	1968..00	1797	1470	327	2008	00	885	76	9.32	0.48	08/95	307.1	.22	23.9	0.52
072009	Wenning	Wennington Br	SD 615701	142.0	FV	1976–00	1343	996	347	1407	00	564	96	4.49	0.14	08/95	90.1	.26	11.0	0.28
072004	Lune	Caton	SD 529653	983.0	CB	1959–00	1529	1142	387	1621	00	732	96	35.61	1.87	07/84	640.5	.32	86.9	3.13
072001 *	Lune	Halton	SD 503647	994.6	VA	1959–76	1459	1069	390	1474	67	778	76	33.71	2.17	08/76	658.2	.33	81.3	3.12
073015	Keer	High Keer Weir	SD 523719	48.0	FV	1976..00	1174	399	775	692	00	230	96	0.61	0.03	08/76	13.0	.40	1.3	0.06
073008	Bela	Beetham	SD 496806	131.0	FV	1969..00	1326	854	472	1259	00	528	71	3.55	0.37	07/84	35.3	.49	8.4	0.50
073003	Kent	Burneside	SD 507956	73.6	VA	1981..99	1936	1678	258	2132	94	1100	96	3.92	0.17	08/95		.39	9.0	0.27
073009	Sprint	Sprint Mill	SD 514961	34.6	FV	1976..00	2168	1724	444	2286	00	1219	96	1.89	0.09	07/84	32.2	.36	4.6	0.16
073011	Mint	Mint Bridge	SD 524944	65.8	FV	1970..00	1631	1163	468	1705	00	776	71	2.43	0.10	07/84	39.0	.40	6.0	0.20
073005	Kent	Sedgwick	SD 509874	209.0	CBVA	1968–00	1757	1351	406	1923	00	905	71	8.96	0.68	07/84	112.5	.42	21.2	1.12
073014	Brathay	Jeffy Knotts	NY 360034	57.4	VA	1976..00	2957	2398	559	3044	00	1724	96	4.36	0.21	08/83	44.6	.30	11.0	0.31
073013	Rothay	Miller Bridge Ho	NY 371042	64.0	VA	1976..00	2528	2111	417	2686	00	1505	96	4.28	0.20	08/95	112.4	.33	10.3	0.35
073006	Cunsey Beck	Eel House Br	SD 369940	18.7	VA	1976..00	2010	1541	469	2196	00	614	76	0.91	0.00	06/78		.41	2.3	0.01
073010	Leven	Newby Bridge	SD 367863	247.0	CC	1939–00	2180	1773	407	2788	54	1174	96	13.89	0.56	09/59		.50	31.2	1.25
073002	Crake	Low Nibthwaite	SD 294882	73.0	VA	1963–00	2179	1749	430	2416	00	1208	73	4.05	0.21	08/83	22.3	.58	8.7	0.59

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
073001 *	Leven	Newby Bridge	SD	371863	241.0	VA	1970–76	1974	1634	340	1934	74	1208	73	12.49	0.71	09/72	61.5	.48	28.9	1.03
074008	Duddon	Ulpha	SD	209947	47.9	CB	1976..00	2572	2055	517	2822	00	1620	76	3.12	0.22	05/80		.26	8.0	0.26
074001	Duddon	Duddon Hall	SD	196896	85.7	CB	1968–00	2230	1776	454	2210	81	1234	73	4.82	0.35	08/95	120.2	.29	11.6	0.45
074007	Esk	Cropple How	SD	131978	70.2	VA	1976..00	2274	2035	239	2769	00	1598	96	4.53	0.18	05/80		.30	10.7	0.35
074002	Irt	Galesyke	NY	136038	44.2	VA	1967..00	2732	2371	361	3492	00	1741	71	3.32	0.26	05/80	20.0	.47	7.2	0.42
074006	Calder	Calder Hall	NY	035045	44.8	FV	1964..00	1795	1293	502	1774	70	1002	96	1.84	0.14	08/76	40.6	.41	4.0	0.31
074003	Ehen	Bleach Green	NY	084154	44.2	CC	1973..00	2621	1768	853	2752	00	1173	76	2.48	0.31	08/76		.35	6.2	0.39
074005	Ehen	Braystones	NY	009061	125.5	VA	1974–00	1815	1295	520	1794	00	995	76	5.16	0.66	08/76	87.3	.42	11.9	0.87
075007	Glend'mackin	Threlkeld	NY	323248	64.5	VA	1969..00	1716	1668				769	73	3.41	0.03	07/86	68.1	.40	8.3	0.26
075001	St Johns Bk	Thirlmere Res	NY	313195	42.1	CC	1935..00	2679	614	2065	1297	54	150	76	0.82	0.13	10/75		.37	1.8	0.15
075009	Greta	Low Briery	NY	286242	145.6	VA	1971–00	2013	1106	907	1648	00	597	73	5.11	0.44	08/95	112.4	.38	12.4	0.63
075005	Derwent	Portinscale	NY	251239	235.0	VA	1972..00	2278	1620	658	2279	00	946	73	12.07	0.45	05/80	114.8	.43	29.3	1.26
075006 *	Newlands Bk	Braithwaite	NY	240239	33.9	VA	1968..97	2221	1487	734	1925	74	911	96	1.60	0.00	08/95	45.5	.30	3.7	0.04
075003	Derwent	Ouse Bridge	NY	199321	363.0	VA	1968..00	2053	1457	596	2125	00	825	73	16.77	1.00	06/78		.51	39.8	1.86
075016	Cocker	Scalehill	NY	149214	64.0	MIS	1976..00	2364	1834	530	3218	00	1216	76	3.72	0.09	03/77		.40	8.9	0.36
075004	Cocker	Southwaite Br	NY	131281	116.6	VA	1967–00	2003	1439	564	2017	00	848	73	5.32	0.48	06/88	51.1	.43	12.7	0.63
075010 *	Marron	Ullock	NY	074238	27.7	FV	1972–77	1450	940	510	1113	77	648	73	0.83	0.11	08/76	17.6	.49	1.8	0.12
075002	Derwent	Camerton	NY	038305	663.0	VA	1960–00	1798	1241	557	1802	00	705	73	26.09	2.04	06/78	188.3	.49	60.3	3.28
075017	Ellen	Bullgill	NY	096384	96.0	FV	1976..00	1130	762	368	1091	00	415	96	2.32	0.19	08/76	52.9	.50	5.3	0.28
076014	Eden	Kirkby Stephen	NY	773097	69.4	B VA	1971..00	1442	1168	274	1646	00	763	96	2.57	0.09	08/95	123.8	.26	6.5	0.16
076005	Eden	Temple Sowerby	NY	605283	616.4	VA	1964..00	1170	738	432	1044	00	444	73	14.42	1.46	08/95	251.3	.38	33.6	1.87
076001	Haweswater	Burnbanks	NY	508159	33.0	CC	1953..00	2524	530	1994	2046	54	256	96	0.56	0.10	10/84		.49	0.5	0.21
076004	Lowther	Eamont Bridge	NY	527287	158.5	VA	1962..00	1885	706	1179	1148	00	384	76	3.55	0.47	07/84	101.7	.40	7.8	0.67
076015	Eamont	Pooley Bridge	NY	472249	145.0	CC	1970–00	2247	1711	536	2357	00	861	73	7.87	0.62	09/95		.54	18.0	0.98
076003	Eamont	Udford	NY	578306	396.2	VA	1961..00	1851	1208	643	1955	00	550	73	15.18	0.59	06/80	168.9	.52	32.3	2.23
076002 *	Eden	Warwick Bridge	NY	470567	1366.7	VA	1959–98	1289	785	504	990	67	459	73	34.04	4.41	07/89	417.1	.50	72.8	6.82
076011	Coal Burn	Coalburn	NY	693777	1.5	CB	1967..00	1286	946	340	1240	83	610	96	0.05	0.00	08/95	2.0	.18	0.1	>0.00
076008	Irthing	Greenholme	NY	486581	334.6	VA	1967..00	1077	707	370	964	87	413	73	7.50	0.82	08/76	194.3	.32	17.5	1.02
076010	Petteril	Harraby Green	NY	412545	160.0	MIS	1970..00	936	423	513	640	00	210	73	2.14	0.20	08/95	24.7	.47	5.4	0.27
076009	Caldew	Holm Hill	NY	378469	147.2	VA	1968..00	1436	967	469	1230	82	554	96	4.51	0.42	08/96	80.0	.49	10.3	0.71
076007	Eden	Sheepmount	NY	390571	2286.5	VA	1967..00	1214	716	498	1000	00	389	73	51.91	7.02	08/76	569.6	.49	114.7	9.72
077001	Esk	Netherby	NY	390718	841.7	VA	1963..00	1461	988	473	1303	98	587	73	26.37	2.26	07/84	603.6	.38	62.9	3.31
077005	Lyne	Cliff Bridge	NY	412662	191.0	FV	1976..99	1157	857	300	1200	98	533	96	5.19	0.38	08/76	122.9	.28	13.4	0.48

Hydrometric Statistics

			Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
068015	**Gowy at Huxley**	C.A: 49.0 km^2	**70..95**	**711**		**230**		**0.36**	**19.5**	**06/08 1981**	**0.05**	**26/07 1990**	**0.9**	**0.24**	**0.08**
M.A: EA	Local No: 684014	Sens.: 17.8													
F.A.R: PG	Level: 17m	UE: <.01	FAI: 0.993												
Comment: Shallow V sheet pile control installed in May 1979; some levels available from EA prior to this but not processed to flow. Some low flow features caused by ponding and release u/s. However, flows above 1.5 m^3s^{-1} should be treated with caution until high flow rating established. # River shares most of its valley with the Shropshire Union Canal. Catchment mostly in Cheshire plain; post glacial Drift overlying Triassic sandstone and marl.			1996	586	82	151	66	0.23	2.7	19/12	0.05	19/07	0.5	0.15	0.06
			1997	669	94	185	80	0.29	7.1	26/06	0.06	09/08	0.5	0.15	0.07
			1998	827	116	316	137	0.49	8.9	03/03	0.07	09/08	1.0	0.30	0.10
			1999	913	128	413	180	0.64	16.4	01/10	0.06	30/07	1.1	0.38	0.11
			2000	977	137	479	208	0.74	19.3	30/10	0.11	29/08	1.9	0.37	0.15
068020	**Gowy at Bridge Trafford**	C.A: 156.0 km^2	**79..95**	**707**		**217**		**1.07**	**38.4**	**06/08 1981**	**0.10**	**17/07 1990**	**2.3**	**0.53**	**0.20**
M.A: EA	Local No: 684027	Sens.: 13.4													
F.A.R: PG	Level: 4m	UE: .01	FAI: 0.995												
Comment: Flat V Crump profile weir (1:5) with flanking broad-crested weirs and cableway, installed 8/79. Replaced Picton (68002), 1km d/s. Similar but less severe weed growth problems. Midsummer flows estimated by gauging from u/s bridge. Rating quite well defined to about 5 m^3s^{-1}. Higher flows over-estimated by rating in current use. # The catchment is wholly on the Cheshire Plain; low relief, glacial drift over Triassic s'st and marl.			1996	598	85	114	53	0.56	11.6	19/12	0.15	21/07	1.0	0.36	0.18
			1997	669	95	132	61	0.65	12.1	28/12	0.13	03/06	1.1	0.37	0.19
			1998	821	116	258	119	1.28	16.5	11/04	0.22	12/08	2.8	0.68	0.30
			1999	897	127	357	165	1.77					3.9	1.04	0.30
			2000	1001	142	456	210	2.25	20.8	06/11	0.36	30/08	5.9	1.17	0.43
068005	**Weaver at Audlem**	C.A: 207.0 km^2	**53..95**	**734**		**239**		**1.57**	**28.3**	**17/04 1959**	**0.04**	**23/08 1976**	**3.7**	**0.83**	**0.23**
M.A: EA	Local No: 680301	Sens.: 11.6	B/full: 18.0m^3s^{-1}												
F.A.R: PGE	Level: 45m	UE: <.01	FAI: 0.992												
Comment: Some level measurement at site since 1936 but continuous records from 1951 when rectangular thin-plate weir was installed to control low flows. C/m calibration for medium flows. New recorder house in 1969 and modern rating assumed to apply from then. Flows from 1973 onwards reprocessed in 2002, with substantial reduction in high flows. Only minor gw abstractions and returns. # The (very flat) catchment is covered by post glacial deposits over marl, clay and sand. Mainly mixed farmland with only a few villages.			1996	591	81	114	48	0.75	10.8	19/12	0.07	19/08	1.8	0.38	0.10
			1997	693	94	154	64	1.01	10.6	28/12	0.17	10/08	2.2	0.54	0.19
			1998	834	114	313	131	2.05	18.1	22/10	0.22	19/08	5.5	0.99	0.30
			1999	908	124	355	149	2.33					5.5	1.56	0.27
			2000	966	132	413	173	2.70	**34.5**	**06/11**	0.29	30/08	6.7	1.39	0.37
068004	**Wistaston Brook at Marshfield Bridge**	C.A: 92.7 km^2	**57..95**	**741**		**331**		**0.97**	**21.0**	**23/08 1987**	**0.08**	**21/08 1995**	**1.8**	**0.68**	**0.22**
M.A: EA	Local No: 680403	Sens.: 13.0	B/full: 14.0m^3s^{-1}												
F.A.R: PGEI	Level: 30m	UE: .08	FAI: 0.985												
Comment: Initially a 6m wide section on a bend with chart records from 1955, but data are poor. Unstable control obliged a move u/s in Sept 1972; low flow control installed 1978 and modified to an informal Flat V piled weir in May 1980. Silt accumulates behind weir in times of low flow. Flows above 0.7m less reliably measured. Bankfull at 2.3m. # Headwaters are in farmland but central and southern parts of Crewe dominate lower half of catchment. Otherwise, post glacial deposits over Keuper Marl.			1996	592	80	134	40	0.39	9.0	19/12	0.05	22/07	0.7	0.30	0.12
			1997	731	99	204	62	0.60	9.1	11/06	0.17	05/06	1.1	0.41	0.24
			1998	847	114	329	99	0.97	17.6	22/10	0.18	28/09	1.8	0.63	0.25
			1999	937	126	361	109	1.06	14.8	03/06	0.17	30/07	1.9	0.76	0.24
			2000	981	132	433	131	1.27	23.1	06/11	0.23	30/08	2.9	0.77	0.27
068001	**Weaver at Ashbrook**	C.A: 622.0 km^2	**37..95**	**749**		**289**		**5.69**	**212.4**	**08/02 1946**	**0.39**	**17/08 1976**	**13.0**	**3.21**	**1.15**
M.A: EA	Local No: 680504	Sens.: 11.6	B/full: 120.0m^3s^{-1}												
F.A.R: PGE	Level: 16m	UE: .02	FAI: 0.984												
Comment: Initially a river section (from 1937). Early gaugings lost; rating accuracy unknown. Mobile control. Data before 1972, particularly low flows, unreliable. Relocated 400m d/s with an informal Flat V control and cableway in Aug 1978. Prone to weed and algal growth. Rerated from 1/12/77. Some bank slippage in 1993; unlikely to have affected data quality but affects the rating. # Flat catchment includes western half of Crewe. Post glacial deposits over (mostly) Keuper Marl.			1996	607	81	164	57	3.23	47.8	19/12	0.76	05/08	6.3	2.08	0.84
			1997	718	96	228	79	4.50	41.5	29/12	1.09	05/10	9.7	2.57	1.22
			1998	850	113	410	142	8.08	54.3	23/10	1.31	12/08	18.7	4.46	1.74
			1999	930	124	473	164	9.33	62.4	02/10	1.18	31/07	20.3	6.23	1.49
			2000	970	130	542	188	10.65	79.9	06/11	1.60	29/08	28.3	5.79	1.84

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
068003	**Dane at Rudheath** C.A: 407.1 km^2	**49..95**	**867**		**381**		**4.92**	**115.9**	**23/08**	**0.43**	**03/10**	**10.9**	**3.04**	**0.92**
M.A: EA	Local No: 681210 Sens.: 10.8 B/full: 63.0m^3s^{-1}								**1987**		**1949**			
F.A.R: SPGEI	Level: 13m UE: .04 FAI: 0.977													
Comment: Originally a VA section; charts from May 1949. Low flows poor before 6/57 (bed lowered). Gauged by wading or from an u/s bridge. Mobile control gave unreliable results. Informal Flat V weir and cableway installed 10/81. Highest flows inundate lb (3.6m). Headwater transfers particularly to Rudyard and Bosley reservoirs for canal usage. # Headwaters in S Pennines but, for most part, river meanders over Cheshire plain with varying depths of post glacial drift overlying Triassic s'st and marl.		1996	651	75	194	51	2.50	62.2	25/11	0.41	20/07	4.9	1.49	0.56
		1997	797	92	274	72	3.53	42.8	27/12	0.74	17/08	7.1	2.17	1.00
		1998	990	114	546	143	7.05	121.1	23/10	1.27	12/08	13.0	4.13	1.56
		1999	1012	117	527	138	6.80	89.2	02/10	0.89	15/09	13.1	4.71	1.12
		2000	1134	131	684	180	8.80	130.7	**06/11**	1.18	24/08	19.9	5.30	1.50
068007	**Wincham Brook at Lostock Gralam** C.A: 148.0 km^2	**62..95**	**828**		**391**		**1.84**	**53.1**	**02/01**	**0.00**	**11/09**	**3.7**	**1.25**	**0.29**
M.A: EA	Local No: 681213 Sens.: 10.1 B/full: 14.5m^3s^{-1}								**1976**		**1992**			
F.A.R: PGEI	Level: 16m UE: .01 FAI: 0.958													
Comment: Open channel section from Oct 1960 in straight reach. Informal steel pile control installed Nov 1981. Siltation problems have led to the control being submerged. Gauging by wading or cableway. Vandal-prone. Bankfull 2.0m. # Low relief catchment with mudstones and saliferous beds of the Mercia Mudstone blanketed by Boulder Clay and glacial sands and gravel. Rural, except for SW Knutsford.		1996	654	79	167	43	0.78	18.9	25/11	0.05	20/07	1.6	0.35	0.10
		1997	767	93	323	83	1.51	16.7	27/12	0.20	22/09	3.5	0.77	0.27
		1998	963	116	559	143	2.62	30.9	06/03	0.25	19/08	6.5	1.13	0.32
		1999	949	115	628	161	2.95	25.3	02/03	0.19	29/07	7.3	1.72	0.31
		2000	1126	136	776	198	3.63	35.0	30/10	0.33	23/07	9.6	2.07	0.43
069015	**Etherow at Compstall** C.A: 156.0 km^2	**71..95**	**1297**		**597**		**2.95**	**85.0**	**21/12**	**0.30**	**05/09**	**6.6**	**1.70**	**0.73**
M.A: EA	Local No: 692190 Sens.: 23.7 S/full: 200.0m^3s^{-1}								**1991**		**1984**			
F.A.R: SPGEI	Level: 74m UE: .02 FAI: 0.838													
Comment: Crump profile weir 18m wide, wing walls 2.8m high. Further contained by flood banks. 0.5 km u/s of Goyt confluence. Crest tapping readings were used to establish a non-modular rating; tapping no longer used. High flow gaugings not possible. Half the catchment drains through Longdendale reservoirs, with significant effect upon flows. # Predominantly Millstone Grit catchment, peat covered moorland in headwaters, steeper slopes drift free, Boulder Clay in lower catchment. Mixed urban and farmland lower down.		1996	1110	86	370	62	1.82	23.8	30/11	0.39	21/08	3.9	1.02	0.57
		1997	1157	89	509	85	2.52	32.8	25/12	0.79	26/08	4.9	1.61	0.98
		1998	1563	121	953	160	4.71	64.1	06/03	1.07	31/05	9.4	3.44	1.26
		1999	1489	115	830	139	4.10	41.4	11/12	1.02	17/09	8.1	3.00	1.21
		2000	1750	135	1109	186	5.47	81.4	06/11	1.15	26/07	11.5	3.87	1.35
069017	**Goyt at Marple Bridge** C.A: 183.0 km^2	**69..95**	**1125**		**640**		**3.71**	**91.6**	**21/12**	**0.40**	**26/08**	**8.3**	**2.24**	**0.74**
M.A: EA	Local No: 692370 Sens.: 10.5 S/full: 190.0m^3s^{-1}								**1991**		**1976**			
F.A.R: SPGEI	Level: 74m UE: .01 FAI: 0.930													
Comment: Compound Crump profile weir, crest lengths 7m and 11m (total). Wing walls 2.9m, divide piers 2.1m. Crest tapping unreliable, subject to siltation, data not used. The weir is fitted with bypass sluices. Reservoirs in headwaters. Moderate disturbance to flow regime. # Catchment mostly Millstone Grit and Coal Measures. Highest moorland peat covered, steeper slopes drift free. Boulder Clay cover lower down. Mixed farmland, small towns and industry in main valley.		1996	921	82	389	61	2.25	26.3	25/11	0.52	05/08	5.4	1.17	0.59
		1997	1033	92	457	71	2.65	21.1	27/12	0.77	16/08	5.6	1.81	0.92
		1998	1391	124	812	127	4.71	72.7	22/10	0.94	01/06	9.0	3.00	1.13
		1999	1322	118	719	112	4.17	37.9	11/12	0.72	17/09	9.1	2.82	0.80
		2000	1582	141	967	150	5.56					12.6	3.91	1.19
069041	**Tame at Broomstair Bridge** C.A: 113.0 km^2	**74..95**	**1264**		**980**		**3.51**	**115.7**	**09/12**	**0.29**	**04/08**	**6.6**	**2.57**	**1.09**
M.A: EA	Local No: Sens.:								**1983**		**1990**			
F.A.R: S	Level: m UE: .08 FAI: 0.908													
Comment: Ultrasonic multi-path gauge replaced (Feb 1995) a non-standard short-crested mill weir. The weir, a control for medium to high flows, was capped with timber that had bowed allowing water to flow beneath it (dev. from rating up to 70%). Thus early record poor. Gaugings made from bridge immediately u/s. Bridge arch shape likely to affect high flows as it extends to river level. Reservoired headwater affects low flows. # Millstone Grit and Coal Measures catchment, peat covered on high moors. Steeper valley sides drift free, otherwise mixed glacial drift cover. Heavily urbanised lower catchment.		1996	1099	87	681	69	2.43	20.7	05/11			5.4	1.55	0.75
		1997	1087	86	736	75	2.64	23.3	19/02	0.69	16/08	4.8	2.03	1.17
		1998	1485	117	*1183*	121	4.24					7.9	2.90	1.40
		1999	1444	114	1166	119	4.18	51.6	02/03	0.96	07/08	8.8	2.82	1.21
		2000	1669	132	1474	150	5.27	62.9	06/11	1.24	23/07	11.1	3.56	1.42
069027	**Tame at Portwood** C.A: 150.0 km^2	**69..95**	**1171**		**861**		**4.09**	**445.2**	**16/07**	**0.61**	**11/01**	**7.9**	**2.88**	**1.37**
M.A: EA	Local No: 692423 Sens.: 13.5								**1973**		**1973**			
F.A.R: SPGEI	Level: 43m UE: .11 FAI: 0.926													
Comment: Over 100 year old curved mill type weir, 21m wide, 5m high just below 90 deg. bend and 2km above confluence with Goyt. Meandering reach but bypassing on rb floodplain prevented by stop banks. An old mill cut was closed in 1967. Records from 1943; a model-based calibration was used before 1970 but superseded by one based on current metering. Low flows dominated by effluent; upper catchment with many impoundments. # For the most part a narrow, steep sided valley network on the Millstone Grit with peat moorland and sheep grazing in the headwaters; lower half of catchment is covered by Boulder Clay and is heavily urbanised.		1996	1029	88	606	70	2.87	27.2	05/11	1.15	19/08	5.8	1.83	1.26
		1997	1027	88	641	74	3.05	25.3	05/05	1.27	20/08	5.4	2.40	1.42
		1998	1396	119	987	115	4.69	70.5	22/10	1.54	31/05	8.6	3.14	1.74
		1999	1365	117	979	114	4.66	52.1	11/12	1.41	31/07	9.2	3.19	1.61
		2000	1579	135	1197	139	5.68	64.4	06/11	1.39	23/07	11.8	3.87	1.60
069007	**Mersey at Ashton Weir** C.A: 660.0 km^2	**76..95**	**1117**		**564**		**11.80**	**563.4**	**21/12**	**1.90**	**26/08**	**24.5**	**7.45**	**3.07**
M.A: EA	Local No: 692726 Sens.: 5.4 B/full: 500.0m^3s^{-1}								**1991**		**1984**			
F.A.R: SPGEI	Level: 15m UE: .10 FAI: 0.923													
Comment: Replaced 69001 but, despite theoretical superiority at low flows, still doubts about rating curve. Compound broad-crested weir with cableway; no divide piers so theoretical (and model) ratings complemented by gaugings. Longdendale reservoirs control 10% of the catchment. # Tributary streams rise mainly on western slopes of Pennines (Millstone Grit). Lower catchment includes much of Greater Manchester, lies on post-glacial deposits over Triassic sandstone and marl.		1996	934	84	402	71	8.39	62.0	25/11	2.92	20/08	17.2	5.37	3.23
		1997	991	89	481	85	10.06	79.7	26/12	4.26	20/08	18.4	7.55	4.76
		1998	1324	119	853	151	17.85	481.7	22/10	4.72	31/05	30.7	11.77	5.75
		1999	1281	115	744	132	15.56	230.9	11/12	4.54	18/09	30.0	11.00	4.94
		2000	1503	135	988	175	20.62	492.6	06/11	5.01	20/08	39.9	14.12	5.62
069044	**Irwell at Bury Ground** C.A: 139.9 km^2	**92..95**	**1094**		**501**		**2.22**	**75.1**	**25/01**	**0.30**	**22/08**	**4.9**	**1.16**	**0.37**
M.A: EA	Local No: Sens.:								**1995**		**1995**			
F.A.R: SPGEI	**Level: 80m . UE: FAI:**													
Comment: VA station with an old curved broad-crested weir as control. Weir width 28m, river at cableway u/s 22m. Good approach. Replaces Bury Bridge gauge 300m d/s (69035). Runoff influenced by storage reservoirs, abstractions and effluent returns. #Catchment mostly u/s of urban and industrial areas dominating d/s station at Adelphi Weir (69002). Geology: post-glacial deposits over Carboniferous rocks.		1996	883	81	333	66	1.47	52.0	06/08	0.41	23/09	2.9	0.92	0.46
		1997	1040	95	414	83	1.84	20.8	08/10	0.54	18/08	3.9	1.24	0.64
		1998	1347	123				146.1	23/10	0.72	01/06	5.5	2.08	0.87
		1999	1315	120	565	113	2.51	29.1	01/03	0.41	18/09	5.1	1.96	0.50
		2000	1454	133										
069042	**Ding Brook at Naden Reservoir** C.A: 2.2 km^2	**82..95**	**1387**		**1018**		**0.07**	**2.7**	**31/01**	**0.01**	**03/09**	**0.2**	**0.04**	**0.01**
M.A: EA	Local No: 690268 Sens.:								**1995**		**1995**			
F.A.R:	Level: m UE: FAI:													
Comment: Compound rectangular thin-plate weir (leaking as of 2002), crest lengths 0.5, 2.48, 7.76m on an inflow stream to the reservoir. Effective record starts 13/7/82 following fitting of new crest plates. Gravel trap in steep approach channel. All flows contained, fully modular. Theoretical calibration. U/s channel slope makes check gauging difficult. Natural catchment. # High relief moorland catchment on Coal Measures with hilltop peat and subordinate Boulder Clay. Rough grass, bracken, scrub and heather; sheep grazing. Disused quarry high up the catchment.		1996	1196	86	745	73	0.05	2.2	05/11	0.01	05/08	0.1	0.03	0.01
		1997	1358	98	764	75	0.05	1.1	09/12	0.01	22/04	0.1	0.03	0.01
		1998	1809	130	1298	128	0.09	2.2	24/10	0.02	30/05	0.2	0.06	0.02
		1999	1589	115	1146	113	0.08	2.0	29/09	0.01	31/07	0.2	0.05	0.01
		2000	1829	132	1425	140	0.10	2.2	03/06	0.01	26/07	0.2	0.06	0.02
069022	**Irwell at Irwell Vale** C.A: 101.0 km^2													
M.A: EA	Local No: Sens.:													
F.A.R: SPGEI	Level: 140m UE: FAI:													
Comment: VA station with non-standard Flat V installed to replace Stubbins gauge (69040). Sound gaugings by wading at low flows only; bridge gaugings u/s are unreliable due to the nature of the bridge and inflows from River Ogden. Reservoirs in headwaters have significant affect on low flows. # Moderate relief catchment draining the Forest of Rossendale. Solid geology Millstone Grit and Coal Measures; peat on highest moors, intermittent glacial drift otherwise. Urbanised main valley.		1996	1129												
		1997	1214		783		2.51	74.9	17/02	0.62	20/08	6.1	1.32	0.72
		1998	1673		1279		4.09	221.6	24/10	0.76	31/05	7.8	2.32	0.97
		1999	1529		1053		3.37	87.6	01/10	0.61	31/07	7.6	1.86	0.68
		2000	1809		1345		4.30	182.4	29/10	0.67	26/07	9.2	2.44	0.85
069023	**Roch at Blackford Bridge** C.A: 186.0 km^2	**78-95**	**1243**		**836**		**4.93**	**282.9**	**31/01**	**1.07**	**26/08**	**10.1**	**2.96**	**1.48**
M.A: EA	Local No: 690205 Sens.: 9.9								**1995**		**1984**			
F.A.R: SPGEI	Level: 63m UE: .11 FAI: 0.921													
Comment: Broad-crested mill-type curved weir with damaged crest and affected by debris. Siltation affected inlet pipe pre-1984. Original theoretical rating unsafe; a c/m rating was applied back to 1949 notwithstanding doubts about state of weir in earlier years. Cableway installed 2001 to improve high range. Several water supply reservoirs in headwaters. # Catchment is highly urbanised (Rochdale) in lower half. Peat moorland tops. Mostly Coal Measures with Millstone Grit to the east.		1996	1038	84	545	65	3.21	106.8	05/11	1.24	18/08	6.7	1.85	1.33
		1997	1054	85	600	72	3.54	44.1	09/12	1.44	17/08	7.1	2.37	1.59
		1998	1534	123	1090	130	6.43	170.4	24/10	1.86	31/05	11.7	3.95	2.15
		1999	1410	113	967	116	5.70	103.8	16/12	1.40	15/09	12.6	3.25	1.50
		2000	1651	133	1255	150	7.38	211.4	03/06	1.78	26/07	15.6	4.59	2.08

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
069024	**Croal at Farnworth Weir** C.A: 145.0 km^2	**76..95**	**1311**		**656**		**3.02**	**101.6**	**27/10 1980**	**0.28**	**24/05 1980**	**7.0**	**1.59**	**0.67**
M.A: EA	Local No: 690408 Sens.: 30.3 B/full: 120.0m^3s^{-1}													
F.A.R: SPGEI	Level: 52m UE: .12 FAI: 0.879													
Comment: Mill weir, 45m wide in narrower, shallow river; insensitive. Tight meander immediately u/s; flows above 70 m^3s^{-1} will bypass station on the inside of the loop. Some records from 1948 but low and medium flows before 1976 particularly are of doubtful quality, although none are good. New cableway (2001) should improve high range rating. Several reservoirs u/s. Many effluent discharges lower down. # Peat moorland over Millstone Grit on the tops. Heavy urbanisation (Bolton) on Boulder Clay over Coal Measures in the lower parts.		1996	1095	84	395	60	1.81	35.9	05/11	0.32	17/09	3.9	0.93	0.46
		1997	1203	92	478	73	2.20	31.6	20/05	0.63	19/08	4.9	1.26	0.71
		1998	1591	121	836	127	3.84	64.5	24/10	0.85	31/05	8.4	2.33	0.97
		1999	1472	112	784	120	3.61	51.0	16/12	0.52	05/09	9.1	1.95	0.65
		2000	1700	130	930	142	4.27	76.3	30/10	0.70	15/05	10.4	2.40	0.83
069003	**Irk at Scotland Weir** C.A: 72.5 km^2	**37..95**	*1033*		**819**		**1.88**	**72.9**	**11/06 1970**	**0.14**	**19/06 1961**	**3.6**	**1.38**	**0.48**
M.A: EA	Local No: 690612 Sens.: 22.0													
F.A.R: SPGEI	Level: 26m UE: .29 FAI: 0.964													
Comment: An old weir, diagonal to flow and on a bend in a heavily polluted river. Ratings by model (1936) and c/m gauging at Redbank 1km u/s. Siltation, debris and weed growth are recurrent problems and throw particular doubt on low-flow records before 1976, although none are good. Weir damaged by Dec 1983 flood, subsequent flows under review. Station closed May 2001. Many industrial abstractions and effluent discharges. Replaced by Collyhurst in 1995. # Low to moderate relief catchment, extensively urbanised in northern Manchester. Solid geology: Coal Measures and Permo -Triassic s'sts, fully overlain by post-glacial sands and gravel and subordinate boulder clay.		1996	895	87	410	50	0.94	24.9	05/11	0.31	18/08	2.3	0.53	0.37
		1997	889	86	357	44	0.82	28.1	05/05	0.27	17/08	1.7	0.54	0.29
		1998	1241	120	463	57	1.06	39.5	06/03	0.30	07/10	2.3	0.53	0.32
		1999	1205	117	408	50	0.94	30.9	11/12	0.22	29/10	2.1	0.48	0.26
		2000	1388	134	578	71	1.33	49.1	03/06	0.31	23/07	3.0	0.61	0.34
069002	**Irwell at Adelphi Weir** C.A: 559.4 km^2	**49..95**	**1260**		**1007**		**17.86**	**486.4**	**31/01 1995**	**1.05**	**29/07 1951**	**37.7**	**11.36**	**4.83**
M.A: EA	Local No: 690511 Sens.: 9.5													
F.A.R: SPGEI	Level: 24m UE: .11 FAI: 0.929													
Comment: 40m wide broad-crested weir subject to siltation, weed growth and drowning at high flow. Some records from 1935; routine data capture began in 1949. Rating established by model test and gauging u/s at the Manchester racecourse gauge (closed 2/86). Station rerated from 1/2/75. Presents intractable maintenance problems. Many abstractions and storage reservoirs. # Most of the catchment comprises post glacial drift over heavily faulted Carboniferous grit, shale and s'st; includes the urban/industrial areas of Bolton, Bury and Rochdale.		1996	1047	83	707	70	12.51	221.2	05/11	4.61	22/09	25.8	8.11	5.05
		1997	1110	88	748	74	13.26	121.9	17/02	3.25	26/05	25.7	9.19	5.78
		1998	1535	122	1081	107	19.18	306.2	24/10	5.21	24/05	37.8	13.02	5.83
		1999	1420	113	*1042*	103	18.32	200.6	02/03	3.25	01/06	39.1	11.35	5.48
		2000	1657	132				248.6	30/10					
069020	**Medlock at London Road** C.A: 57.5 km^2	**75..95**	**1034**		**516**		**0.94**	**43.5**	**17/10 1991**	**0.14**	**30/06 1984**	**1.9**	**0.63**	**0.26**
M.A: EA	Local No: 690713 Sens.: 21.2 S/full: 32.0m^3s^{-1}													
F.A.R: SPGEI	Level: 31m UE: .25 FAI: 0.993													
Comment: A non-standard weir in a rectangular channel (brick and concrete panel walls). The weir was designed as an entrance sill to the culvert d/s. Theoretical formula in use to Nov 1976 when superseded by c/m based rating. Access is difficult and gauging hazardous. Greatly affected by effluent discharges with consequent heavy pollution; also problems with debris on weir. Very poor site. # The catchment is heavily urbanised. Any natural runoff is generated on soils derived from post-glacial deposits lying mostly over Coal Measures.		1996	910	88	272	53	0.50	4.6	10/08	0.13	27/07	1.0	0.34	0.19
		1997	923	89	274	53	0.50	6.8	05/05	0.19	02/06	0.9	0.38	0.22
		1998	1257	122	396	77	0.72	9.5	06/03	0.24	21/05	1.2	0.55	0.27
		1999	1177	114	362	70	0.66	6.7	01/10	0.19	14/09	1.3	0.48	0.22
		2000	1360	132	428	83	0.78	12.8	03/06	0.20	23/07	1.6	0.60	0.24
069019	**Worsley Brook at Eccles** C.A: 24.9 km^2	**69..95**	**945**		**411**		**0.32**	**15.0**	**28/12 1978**	**0.03**	**16/07 1994**	**0.6**	**0.22**	**0.08**
M.A: EA	Local No: 690914 Sens.: B/full: 46.0m^3s^{-1}													
F.A.R: PGEI	Level: 15m UE: .25 FAI: 0.969													
Comment: Critical depth trapezoidal flume in artificial channel; throat width 0.6m, side slopes 1:2. Structure full at 2.43m, flood banks at 3.13m. Flows fully contained. Twin box culvert 110m d/s with grids may block in flood, drowning flume. Data quality poor. Station closed April 2001. # Generally low relief catchment to the NW of Manchester. Solid geology is 80% Coal Measures with Permo-Triassic s'sts to the S, almost all covered with Boulder Clay. Urban areas cover about 40%, otherwise poor pasture and heathland with small area of woodland. Dense motorway network includes the M61, M62, M63, M602.		1996	791	84	170	41	0.13	4.7	24/08	>0.00	04/04	0.3	>0.00	>0.00
		1997	848	90	210	51	0.17	4.6	20/05	0.04	11/08	0.4	0.11	0.05
		1998	1118	118	352	86	0.28	11.4	22/10	0.05	08/10	0.7	0.17	0.05
		1999	1117	118	337	82	0.27	4.0	13/05	0.05	30/07	0.6	0.16	0.07
		2000	1275	135										
069013	**Sinderland Brook at Partington** C.A: 44.8 km^2	**76..95**	**811**		**377**		**0.54**	**19.4**	**06/08 1981**	**0.10**	**22/08 1976**	**1.1**	**0.36**	**0.16**
M.A: EA	Local No: 693132 Sens.: 14.8 S/full: 38.0m^3s^{-1}													
F.A.R: PGEI	Level: 13m UE: .20 FAI: 0.989													
Comment: Compound Crump profile weir, crest lengths 2.13m and 5.48m (total). Contained to wing wall height (2.0m). Weir much wider than u/s channel; big siltation problem, crest tapping usually blocked. Storm waters from Wythenshaw, Sale and the M56 are directed to the Mersey. Moderately responsive. # Very flat catchment, 60% urbanised although the bottom end is rural. Solid geology is Keuper Marl, 70%, and s'st, 30%; SE half Boulder Clay covered. Soils fine red loams or clays.		1996	665	82	246	65	0.35	4.6	31/10	0.11	15/08	0.7	0.24	0.14
		1997	714	88	271	72	0.39	4.2	10/11	0.15	19/08	0.7	0.29	0.17
		1998	941	116	417	111	0.59	7.4	22/10	0.19	23/09	1.2	0.40	0.21
		1999	891	110	371	98	0.53	4.8	02/03	0.14	31/07	1.0	0.37	0.16
		2000	1062	131	477	127	0.68	8.4	30/10	0.18	25/07	1.5	0.46	0.20
069012	**Bollin at Wilmslow** C.A: 72.5 km^2	**76-95**	**925**		**542**		**1.25**	**23.7**	**25/01 1995**	**0.28**	**16/08 1977**	**2.4**	**0.91**	**0.46**
M.A: EA	Local No: 693435 Sens.: 9.4 S/full: 48.0m^3s^{-1}													
F.A.R: SPGEI	Level: 59m UE: .08 FAI: 0.965													
Comment: Compound Crump profile weir, crest lengths 4.1m and 4.3m (total); divide piers 1.0m (probable drowning stage), wing walls 2.0 m. Silts up, cleaned quarterly. Crest tapping well bricked off. Calibration now by current metering; d/s for low flows, u/s off road bridge for high. Responsive. Substantial flow modifications. # Moderate relief catchment with steep, reservoired headwaters. Upper catchment drains Millstone Grit, generally Drift free. Otherwise Boulder Clay and glacial sands and gravel over Permo-Triassic sandstone. Contains Macclesfield.		1996	763	81	333	61	0.76	11.2	25/11	0.29	05/08	1.3	0.55	0.36
		1997	871	94	388	72	0.89	10.7	09/10	0.41	20/08	1.6	0.68	0.45
		1998	1141	123	685	126	1.57	45.6	27/10	0.46	30/05	2.8	1.07	0.54
		1999	1102	119	646	119	1.48	13.3	24/11	0.44	01/08	2.9	1.08	0.52
		2000	1244	134	803	148	1.84	25.0	05/11	0.50	13/09	3.9	1.29	0.58
069008	**Dean at Stanneylands** C.A: 51.8 km^2	**76..95**	**934**		**466**		**0.76**	**13.5**	**30/12 1986**	**0.04**	**09/07 1976**	**1.7**	**0.47**	**0.11**
M.A: EA	Local No: 693333 Sens.: S/full: 50.0m^3s^{-1}													
F.A.R: SPGEI	Level: 57m UE: .03 FAI: 0.960													
Comment: Compound Crump profile weir, low crest 3.05 m, two flanking crests, each 3.05m at 0.46m. Crest tapping no longer used. Low to medium flow range calibrated by c/m. High flows only possible to gauge since a footbridge 200m u/s of the structure has been built. Channel accretes at high flow requiring regular clearance. Significant flow disturbance from reservoir, abstractions and returns. # Steep moorland headwaters drain Millstone Grit from W Pennines and contain Lamaload Res. Lower catchment is on Boulder Clay covered Triassic s'st and contains Bollington.		1996	784	84	248	53	0.41	5.6	25/11	0.04	21/07	1.0	0.21	0.06
		1997	901	96	309	66	0.51	6.3	27/12	0.08	20/08	1.1	0.33	0.13
		1998	1142	122	635	136	1.04	20.1	27/10	0.23	31/05	2.0	0.68	0.27
		1999	1122	120	*601*	129	0.99	9.7	01/10	0.13	18/09	2.1	0.68	0.16
		2000	1302	139	836	179	1.37	15.8	06/11	0.23	24/08	3.2	0.94	0.31
069006	**Bollin at Dunham Massey** C.A: 256.0 km^2	**55..95**	**880**		**513**		**4.17**	**63.0**	**31/05 1964**	**0.57**	**04/10 1959**	**8.5**	**2.92**	**1.14**
M.A: EA	Local No: 693536 Sens.: B/full: 76.0m^3s^{-1}													
F.A.R: SPGEI	Level: 13m UE: .05 FAI: 0.956													
Comment: V/A station with cableway a few kms u/s of confluence with the Manchester Ship Canal. Level records from 1937. Flows from 1954 but of poor quality. Rating only approx. owing to very unstable bed and weed growth. In 8/71, the Bridgewater Canal (crosses just u/s) burst its banks and disturbed the bed of the river - records were affected for at least 18 months. Reservoirs and many industrial abstractions and discharges. US gauge a possibility 1997/8. # Catchment includes Macclesfield. Post-glacial deposits over marl in lower parts; Millstone Grit higher up.		1996	711	81	387	75	3.13	33.7	25/11	1.16	01/02	5.9	2.20	1.29
		1997	820	93	420	82	3.41	28.9	27/12	1.34	28/09	6.8	2.41	1.46
		1998	1043	119	743	145	6.03	48.6	27/10	1.52	01/06	12.3	3.87	1.88
		1999	1003	114	685	134	5.56	39.2	02/10	1.29	05/09	12.0	3.63	1.54
		2000	1195	136	962	188	7.79	48.7	30/10	1.70	23/08	18.8	5.03	1.96
069030	**Sankey Brook at Causey Bridge** C.A: 154.0 km^2	**77..95**	**889**		**540**		**2.64**	**41.0**	**27/10 1980**	**0.26**	**17/08 1977**	**5.5**	**1.71**	**0.83**
M.A: EA	Local No: 694039 Sens.: 7.1													
F.A.R: PEI	Level: 7m UE: FAI:													
Comment: VA gauge, records from 1953. Backwater problems from sluice operation ceased with closure of adjacent canal in 1976. Frequent calibration changes followed continual d/s channel works in 1976/7 (also caused by floods in 1981). New trench-piled bed control and stone pitched lb built 07/1983; acts as a weir up to 0.35m. Bankfull 2.66m. Full rerating for the structure 2001. Susceptible to siltation and weed growth. Industrial abstraction and effluent. # Mixed farmland predominates but extensive urbanisation (St Helens) in the centre. Boulder Clay over Bunter S'st in the S, Coal Measures to the north.		1996	735	83	377	70	1.84	15.9	25/11	0.65	23/09	3.4	1.29	0.78
		1997	846	95	413	76	2.02	18.4	26/12	0.75	29/09	3.8	1.44	0.83
		1998	1041	117	592	110	2.89	24.2	06/03	0.91	31/05	5.8	2.10	1.01
		1999	1045	118	512	95	2.50	20.6	11/12	0.60	30/07	5.1	1.74	0.71
		2000	1250	141	724	134	3.53	36.0	30/10	0.81	21/07	8.0	2.17	0.94

			Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
069032	**Alt at Kirkby**	C.A: 90.1 km^2	**77..95**	**866**		**473**		**1.35**	**21.4**	**04/09**	**0.35**	**21/08**	**2.7**	**0.89**	**0.52**
M.A: EA	Local No: 694744	Sens.: 16.4								**1995**		**1995**			
F.A.R: GEI	Level: 9m	UE:	FAI:												
Comment: Originally (from 1963) an open channel section but patterns of silt deposition and removal prevented sensible calibration until 1977 when a Flat V bed control was built. Weir is permanently drowned. Inlet pipe needs regular flushing. Gaugings taken from u/s footbridge. Vandal prone. Industrial abstraction and discharges. # Catchment highly urbanised (70%) containing northern parts of Liverpool, also Kirkby. Very flat, effective boundary on SW side is difficult to define. Mostly blown sand deposits over Triassic S'st.			1996	733	85	332	70	0.94	10.0	24/11	0.32	21/09	2.0	0.62	0.35
			1997	804	93	367	78	1.05	15.9	10/11	0.42	15/08	2.0	0.68	0.45
			1998	969	112										
			1999	999	115										
			2000	1163	134	698	148	1.99	23.0	30/10	0.30	16/07	4.4	1.26	0.49
070003	**Douglas at Central Park Wigan**	C.A: 55.3 km^2	**77..95**	**1142**		**665**		**1.17**	**30.1**	**09/12**	**0.00**	**01/08**	**2.3**	**0.79**	**0.36**
M.A: EA	Local No: 700325	Sens.: 22.4								**1983**		**1994**			
F.A.R: SRPEI	Level: 32m	UE: .05	FAI: 0.862												
Comment: Originally a VA station in a culverted section with a 0.45m sewer pipe as a low flow control. Variable bed profile from silt, dumped debris and occasional redistribution (9/1989). Data are poor. Replaced 1995 by ultrasonic gauge beneath a d/s footbridge. Recorder 'hut' is a room beneath the main stand. Flow regime substantially affected by reservoirs in the headwaters. # Moderate relief catchment. Solid geology, Coal Measures but wholly blanketed by Boulder Clay.			1996	952	83	427	64	0.75	5.1d	05/11	0.27	21/09	1.5	0.47	0.29
			1997	1051	92	*539*	81	0.94					1.9	0.61	0.42
			1998	1339	117	843	127	1.48	9.1d	08/01	0.42	01/06	3.0	1.13	0.47
			1999	1310	115										
			2000	1513	132										
070002	**Douglas at Wanes Blades Bridge**	C.A: 198.0 km^2	**73..95**	**1028**		**609**		**3.82**	**70.3**	**22/08**	**0.00**	**01/07**	**7.8**	**2.71**	**1.07**
M.A: EA	Local No: 700306	Sens.:	B/full: 32.0m^3s^{-1}							**1987**		**1983**			
F.A.R: SRPEI	Level: 4m	UE: .10	FAI: 0.922												
Comment: V/A station, weed, silt and tidally affected, 50m d/s of R. Tawd confluence. Original river section gave poor data. In 1984, a non-standard flat vee was installed - data improved. Gauging by wading, from u/s road bridge and by portable cableway. Flow regime modified by headwater reservoirs and WRW. Replaced by ultrasonic gauge in 1996. # Moderate to low relief catchment. Coal Measures in upper half, Permo-Triassic s'sts in lower half, entirely covered by Boulder Clay, peat and blown sand. Contains Wigan and Skelmersdale but mostly rural.			1996	846	82	661	109	4.14	37.1	07/11	0.68	20/07	9.0	2.67	1.27
			1997	959	93	590	97	3.70	20.1d	26/12	1.04	27/09	7.4	2.66	1.33
			1998	1214	118	803	132	5.04	33.5d	06/03	0.82	31/05	10.7	3.44	1.28
			1999	1190	116										
			2000	1392	135										
070004	**Yarrow at Croston Mill**	C.A: 74.4 km^2	**76-95**	**1029**		**791**		**1.87**	**192.0**	**22/08**	**0.24**	**22/08**	**4.1**	**0.98**	**0.49**
M.A: EA	Local No: 700408	Sens.: 18.7								**1987**		**1976**			
F.A.R: SPGEI	Level: 7m	UE: .07	FAI: 0.951												
Comment: VA station; control is an old, deteriorating, diagonal mill weir, with 3m wide and 10m long crest, susceptible to mud build-up; insensitive at low flows but giving a reasonable medium and high flow calibration, gauged from u/s road bridge. Rivington Res. (feeding mainly the R. Douglas) captures part of the original Yarrow headwaters; compensation from inflow to Rivington and from the reservoir total 7.1 Ml/d. # Catchment includes Chorley. Solid geology, principally Coal Measures with subordinate Millstone Grit and Triassic s'sts. Wholly blanketed with Boulder Clay and glacial sands and gravels.			1996	823	80	484	61	1.14	22.4	05/11	0.38	21/07	2.4	0.65	0.41
			1997	910	88	572	72	1.35	68.1	17/05	0.42	16/08	2.8	0.76	0.47
			1998	1177	114	889	112	2.10	38.9	06/03	0.52	31/05	4.6	1.25	0.58
			1999	1119	109	808	102	1.91	48.0	01/10	0.39	31/07	4.3	1.07	0.48
			2000	1353	131	1289	163	3.03	121.2	30/10	0.51	23/07	6.9	1.52	0.62
070005	**Lostock at Littlewood Bridge**	C.A: 56.0 km^2	**76..95**	**1019**		**666**		**1.18**	**41.2**	**22/08**	**0.11**	**01/06**	**2.5**	**0.78**	**0.33**
M.A: EA	Local No: 700509	Sens.: 8.8								**1987**		**1977**			
F.A.R: N	Level: 4m	UE: .11	FAI: 0.977												
Comment: Natural river section subject to tidal influence and weed growth during the summer period. Difficult to calibrate due to continual accretion and removal of silt by tidal action. Data of poor quality. V-shaped piled weir built as bed control in Feb 1987. Cableway installed to improve gauging performance. Substantially natural. # Low relief catchment on Boulder Clay which blankets Keuper Marl and Millstone Grit in the extreme east. Isolated hill peat. Mixed farming and light urban development.			1996	808	79	479	72	0.85	22.0	24/08	0.29	08/05	1.8	0.47	0.31
			1997	897	88	516	77	0.92	20.5	17/05	0.31	20/04	2.1	0.54	0.34
			1998	1182	116										
			1999	1120	110	715	107	1.27	23.7	01/10	0.31	15/09	2.9	0.69	0.34
			2000	1387	136	1018	153	1.80	30.3	30/10	0.35	11/05	4.5	0.82	0.38
071011	**Ribble at Arnford**	C.A: 204.0 km^2	**66..95**	**1498**		**1122**		**7.26**	**149.1**	**31/01**	**0.17**	**11/08**	**19.6**	**2.92**	**0.43**
M.A: EA	Local No: 710103	Sens.: 13.8	B/full: 210.0m^3s^{-1}							**1995**		**1995**			
F.A.R: N	Level: 117m	UE: <.01	FAI: 1.000												
Comment: A Flat V weir with Crump profile, built 1972 to replace earlier station at Halton West (71802; 1966-73; 1km d/s; rated section) which had not had a satisfactory rating history. The new weir has not fared much better with problems of structural movement due to a geological fault and weed growth in summer. Highest station on Ribble; wholly natural flow regime. # Long narrow catchment, mostly moorland. Carboniferous L'st mostly with some Millstone Grit. Post-glacial deposits on the valley floor.			1996	1144	76	712	63	4.59	97.7	05/11	0.29	25/09	11.5	1.81	0.37
			1997	1359	91	942	84	6.09	112.0	05/05	0.32	17/08	18.8	1.90	0.47
			1998	1713	114	1344	120	8.69	108.9	06/03	0.62	01/06	22.0	4.31	0.92
			1999	1573	105	1211	108	7.83	124.1	06/12	0.50	05/08	19.2	3.47	0.61
			2000	1951	130										
071006	**Ribble at Henthorn**	C.A: 456.0 km^2	**68..95**	**1360**		**934**		**13.51**	**477.0**	**27/10**	**0.42**	**11/08**	**34.2**	**5.96**	**1.00**
M.A: EA	Local No: 710305	Sens.: 12.0	S/full: 3.1m^3s^{-1}							**1980**		**1995**			
F.A.R: N	Level: 39m	UE: <.01	FAI: 0.999												
Comment: Original 1960s natural section augmented by bed control 5/65 to improve calibration. Superseded in 8/68 by a compound broad-crested weir, low notch 3.8m wide, flanking crests 20.6m (total). Algal build-up and leaks affect low flows. Original cableway damaged and not replaced; high flows of questionable accuracy. Largely natural runoff pattern. Only minor effluent discharges. # Mixed farming over most of catchment with several small towns. Moorland tops. Mainly Carboniferous L'st overlain by Boulder Clay in the valleys. Millstone Grit on the SE side.			1996	1035	76	615	66	8.87	211.3	05/11	0.84	23/09	22.5	4.20	0.96
			1997	1226	90	816	87	11.80	230.4	05/05	0.88	18/08	33.1	4.33	1.28
			1998	1548	114	*1137*	122	16.45	249.2	08/01	1.69	27/05	37.8	8.77	2.30
			1999	1462	108	1070	115	15.47	338.2	06/12	1.20	17/09	37.3	7.15	1.45
			2000	1828	134	1475	158	21.28	**494.0**	**30/10**	1.36	26/07	53.9	10.91	1.87
071008	**Hodder at Hodder Place**	C.A: 261.0 km^2	**76-95**	**1641**		**1007**		**8.34**	**488.5**	**23/10**	**0.51**	**27/08**	**21.1**	**3.58**	**0.94**
M.A: EA	Local No: 711610	Sens.: 10.3								**1980**		**1976**			
F.A.R: SRP	Level: 42m	UE: <.01	FAI: 0.969												
Comment: Compound Crump profile weir, flat V centre section, 24.4m wide, 1:20 cross slopes, level flanking crests 14.6m wide (total), built 9/69 to replace Higher Hodder Bridge (71803 3km u/s; records from 1960 unstable calibration). Original cableway removed. Rated by gauging from bridge 200m u/s in support of modified theoretical calibration. Stocks Reservoir controls 15% of the catchment. # Catchment has mixed farming at lower levels but is mostly peat moorland. Millstone Grit and Carboniferous Limestone. Very lightly populated area.			1996	1208	74	601	60	4.96	169.1	05/11	0.97	23/09	11.2	2.40	1.10
			1997	1532	93	879	87	7.28	227.7	05/05	1.04	19/08	22.0	2.55	1.18
			1998	1866	114	1490	148	12.33	230.3	06/03			28.7	7.81	1.59
			1999	1697	103	1123	112	9.29	248.5	06/12	1.16	05/09	21.3	4.53	1.48
			2000	2130	130	1599	159	13.20	383.1	30/10	1.43	30/07	33.0	6.72	1.63
071010	**Pendle Water at Barden Lane**	C.A: 108.0 km^2	**71..95**	**1213**		**862**		**2.95**	**146.5**	**27/10**	**0.29**	**22/08**	**7.0**	**1.44**	**0.47**
M.A: EA	Local No: 712113	Sens.: 10.4	S/full: 894.0m^3s^{-1}							**1980**		**1995**			
F.A.R: SEI	Level: 92m	UE: .06	FAI: 0.969												
Comment: Flat V weir constructed 1971. Calibration by c/m at the site itself and by level correlation with earlier site at Quakers-in-Pendle (71801; 1968-73; tube-mounted recorder; natural channel). Weir has proved unstable (ground failure suspected) and rating adapted. Substantially damaged 1987; awaiting rebuild. Many polluting discharges. # Catchment includes Nelson and Colne urban areas. Peat moorland tops. Geology: largely Carboniferous rocks overlain by Boulder Clay.			1996	951	78	502	58	1.71	68.5	05/11	0.36	18/09	3.8	0.81	0.39
			1997	1038	86	591	69	2.02	54.8	25/12	0.41	20/08	5.1	0.87	0.49
			1998	1385	114	977	113	3.34	60.2	24/10	0.61	24/05	8.1	1.79	0.68
			1999	1406	116	1001	116	3.43	113.1	11/12	0.41	15/09	7.6	1.44	0.49
			2000	1652	136	*1248*	145	4.26	**173.7**	**01/11**	0.46	25/07	9.5	1.96	0.56
071004	**Calder at Whalley Weir**	C.A: 316.0 km^2	**63..95**	**1224**		**856**		**8.58**	**302.7**	**31/01**	**1.04**	**07/09**	**20.0**	**4.78**	**1.96**
M.A: EA	Local No: 712615	Sens.: 7.8	S/full: 9.6m^3s^{-1}							**1995**		**1969**			
F.A.R: EI	Level: 40m	UE: .07	FAI: 0.957												
Comment: Natural river section from 1963; unstable ratings from mobile bed. Flat V Crump profile weir commissioned 30m d/s in 10/70, 24.4m wide, 1:20 cross slopes, structure full at 0.94m. Rating established from current metering from u/s cableway. Severe weed growth problems. Vandal-prone. Few small reservoirs in headwaters. Minor direct abstractions. Many industrial discharges. Much pollution. # Catchment includes Accrington, Burnley and Nelson but there is a lot of moorland above the towns (about 20% urban overall). Boulder Clay over Coal Measures and Millstone Grit (Pennines).			1996	950	78	575	67	5.74	147.6	05/11	1.71	21/07	12.3	3.31	1.85
			1997	1038	85	648	76	6.50	107.7	10/12	1.78	17/08	14.8	3.51	2.00
			1998	1373	112	992	116	9.94	180.1	06/03	2.38	31/05	21.8	6.17	2.74
			1999	1353	111	999	117	10.01	207.3	11/12	1.83	15/09	21.3	5.29	2.10
			2000	1600	131										
071009	**Ribble at New Jumbles Rock**	C.A: 1053.0 km^2	**79..95**	**1409**		**997**		**33.28**	**1209.0**	**27/10**	**2.71**	**26/07**	**82.1**	**15.42**	**4.14**
M.A: EA	Local No: 713056	Sens.:								**1980**		**1984**			
F.A.R: SRP	Level: 31m	UE: .03	FAI: 0.978												
Comment: Velocity area station with a bedrock control (drowned at 1.3m). Level records from 1964. Station resited 50m d/s in 1979 using same control and cableway installed. Station was to monitor the dilution of the polluted Calder tributary by the Ribble itself and the Hodder. # Station just d/s of confluence with R. Calder. For land use and geology, refer to the catchment descriptions for: 71004; 71006 and 71008.			1996	1050	75	619	62	20.60	542.1	05/11	3.40	21/09	47.4	10.96	3.77
			1997	1244	88	809	81	27.03	516.8	05/05	3.59	22/08	80.7	10.95	4.30
			1998	1571	111	1178	118	39.34	639.6	06/03	6.20	31/05	87.7	22.34	7.27
			1999	1484	105	1056	106	35.58	737.6	06/12	4.37	05/09	79.5	17.67	5.40
			2000	1829	130	1456	146	48.48	905.7	30/10	4.58	26/07	121.2	25.06	5.91

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
071001	**Ribble at Samlesbury** C.A: 1145.0 km^2	**60..95**	*1339*		**909**		**33.00**	**891.3**	**12/12 1964**	**1.88**	**22/07 1984**	**80.6**	**16.06**	**4.50**
M.A: EA	Local No: 713018 Sens.: 5.6													
F.A.R: SE	Level: 6m UE: .02 FAI: 0.980													
Comment: Two sites, complex history. VA section with gravel shoal control affected by silt and summer weed, just u/s of tidal limit. Good high flow rating from cableway. Compound Crump profile Flat V weir with level flanking crests built 1970 1km u/s to capture low/medium flows. Station rerated from 1/1/76. Flood warning site. # Geology: Carboniferous Limestone and Millstone Grit; Boulder Clay over Coal Measures and Millstone Grit (Pennines). Lower Ribble adds little industry or population, being mostly agricultural.		1996	1036	77	600	66	21.72	484.3	05/11	4.13	05/02	49.9	11.58	4.45
		1997	1233	92	786	86	28.55	492.9	05/05	4.30	19/08	72.5	12.68	5.23
		1998	1548	116	1083	119	39.34	*597.2*	*06/03*	6.35	23/05	85.1	22.67	7.47
		1999	1466	109	960	106	34.84	428.0d	06/12	3.15	05/09	82.2	17.26	4.36
		2000	1807	135	1385	152	50.15	796.8	30/10	5.41	26/07	121.4	28.04	6.86
071013	**Darwen at Ewood** C.A: 39.5 km^2	**76..95**	**1362**		**948**		**1.19**	**56.6**	**31/01 1995**	**0.20**	**05/09 1976**	**2.5**	**0.70**	**0.34**
M.A: EA	Local No: 713120 Sens.: 13.0													
F.A.R: PEI	Level: 98m UE: .09 FAI: 0.964													
Comment: Open channel VA station, vertical concrete wall forms the lb with a high natural bank on the right. Bed rough, stony but stable, approach channel silty. Flows affected by industrial abstractions u/s. Compensation flows are activated automatically. # Steep headwater catchment, particularly in W, that drains N to the outskirts of Blackburn. Solid geology, Millstone Grit and Coal Measures, with intermittent Boulder Clay, hill peat and glacial gravel in main valley - heavily urbanised at Darwen.		1996	1075	79	682	72	0.85	24.0	05/11	0.28	18/07	1.8	0.48	
		1997	1192	88	705	74	0.88	18.4	09/12	0.24	20/08	2.1	0.48	0.28
		1998	1539	113	1165	123	1.46	30.0	24/10	0.18	07/10	3.1	0.84	0.37
		1999	1476	108	*1022*	108	1.28					2.8	0.70	0.26
		2000	1700	125	1302	137	1.63	32.2	10/10	0.27	26/07	3.4	1.01	0.32
071014	**Darwen at Blue Bridge** C.A: 128.0 km^2	**76..95**	**1224**		**994**		**4.03**	**206.8**	**27/10 1980**	**0.94**	**05/09 1976**	**7.9**	**2.39**	**1.35**
M.A: EA	Local No: 713122 Sens.: 7.8													
F.A.R: PEI	Level: 8m UE: .10 FAI: 0.958													
Comment: Ultrasonic station since 30/7/97, previously an old mill weir modified (1974) into a V profile forming the main control. Water levels are measured 800m u/s so, at low flows, bed control in the intervening reach probably applies; high flow gauging needed to determine whether channel control takes over. Some small reservoirs in headwaters. Effluent discharges. # Upper catchment almost wholly urbanised (Blackburn, Darwen); agricultural in lower half. Glacial clays and gravels blanket Carboniferous grits and shales and Permo-Triassic S'st near the gauge.		1996	962	79	698	70	2.82	79.1	05/11	1.03	06/04	5.8	1.66	1.11
		1997	1095	89	826	83	3.35	20.5d	06/12	1.00	20/07	7.5	1.95	1.22
		1998	1377	113	1224	123	4.97	46.1d	06/03	1.24	31/05	10.6	3.02	1.39
		1999	1313	107	1110	112	4.51	57.4d	01/10	1.06	05/09	10.0	2.50	1.24
		2000	1555	127	1440	145	5.83	68.7d	30/10	1.09	23/07	12.7	3.55	1.34
072008	**Wyre at Garstang** C.A: 114.0 km^2	**67..95**	**1399**		**906**		**3.27**	**177.6**	**27/10 1980**	**0.03**	**27/08 1976**	**7.8**	**1.53**	**0.34**
M.A: EA	Local No: 720107 Sens.: 16.7 B/full: 117.0m^3s^{-1}													
F.A.R: PG	Level: 11m UE: FAI:													
Comment: Initially VA station with a gravel control. From 9/69 Flat V weir, 1:2, 1:2 and 1:20 slopes installed. Rated by gaugings. Flows affected by Garstang intake immediately u/s, Lune transfers via Abbeystead, by Garstang flood basin overspill during high flows and possibly by bankside gravel workings u/s. # Agricultural catchment with moorland-fed headwaters. Geology almost entirely Millstone Grit, peat on high moors, Boulder Clay covers lower catchment.		1996	1124	80	622	69	2.24	77.1	05/11	0.35	22/09	5.4	1.16	0.43
		1997	1342	96	796	88	2.88	101.3	05/05	0.35	22/07	7.8	1.13	0.45
		1998	1635	117	1217	134	4.40	107.5	27/10	0.50	31/05	11.2	2.26	0.74
		1999	1463	105	1018	112	3.68	103.8	01/10	0.37	05/09	8.5	1.71	0.46
		2000	1850	132	1479	163	5.33	159.1	30/10	0.46	27/07	13.7	2.38	0.56
072007	**Brock at U/S A6** C.A: 32.0 km^2	**78..95**	**1429**		**872**		**0.88**	**74.5**	**21/08 1987**	**0.02**	**22/08 1995**	**2.1**	**0.44**	**0.07**
M.A: EA	Local No: 720215 Sens.:													
F.A.R: N	Level: m UE: FAI:													
Comment: Rectangular section broad-crested weir with a central low-flow notch set between stone sidewalls. A d/s stilling pool with a further b-c weir with twin low flow notches next to the banks does not affect the control. High flows rated by current meter from u/s cableway. Coarse gravel shoals above weir on right bank. Natural catchment, flood warning site. # Moderate relief catchment with steep headwaters draining Millstone Grit in north-east and Carboniferous Limestone in south. Peat on high moors, lower catchment Boulder Clay covered. Entirely rural.		1996	1067	75	482	55	0.49	19.8	25/08	0.05	23/06	1.2	0.24	0.06
		1997	1303	91	710	81	0.72	50.2	05/05	0.05	11/07	2.0	0.30	0.08
		1998	1609	113	991	114	1.01	25.4	20/08	0.09	31/05	2.4	0.57	0.14
		1999	1387	97	785	90	0.80	27.0	02/03	0.08	05/09	1.8	0.44	0.11
		2000	1819	127	1203	138	1.22	51.4	30/10	0.07	27/07	2.9	0.67	0.11
072002	**Wyre at St Michaels** C.A: 275.0 km^2	**63..95**	**1258**		**730**		**6.36**	**180.4**	**23/10 1980**	**0.08**	**28/08 1976**	**15.5**	**3.03**	**0.58**
M.A: EA	Local No: 720517 Sens.: 13.1 B/full: 160.0m^3s^{-1}													
F.A.R: SPG	Level: 4m UE: <.01 FAI: 0.950													
Comment: Natural section. Despite inclusion of artificial bed control, low flow calibration found insensitive and Flat V weir built 400m d/s in 1969. High flows still gauged at original site as weir drowns. Tidal effects at spring tide. Abstractions at Garstang but main distortions of flow are the Lune transfer (via Abbeystead) and bankside flood detention ponds. # Catchment is lightly populated, predominantly agricultural. Geology: marl, Bunter S'st, Millstone Grit in Wyre, Carboniferous L'st in Brock catchment.		1996	997	79	449	62	3.90	93.4	05/11	0.51	19/08	9.0	1.80	0.58
		1997	1185	94	624	85	5.44	122.3	05/05	0.48	22/07	14.5	1.83	0.65
		1998	1455	116	981	134	8.56	108.8	06/03	0.77	31/05	23.1	4.54	1.14
		1999	1301	103	799	109	6.97	125.4	02/03	0.58	05/09	16.4	3.39	0.80
		2000	1675	133	1221	167	10.61	141.9	30/10	0.69	27/07	29.1	5.40	1.00
072014	**Conder at Galgate** C.A: 28.5 km^2	**76..95**	**1222**		**767**		**0.69**	**27.4**	**08/12 1983**	**0.02**	**30/08 1995**	**1.7**	**0.34**	**0.06**
M.A: EA	Local No: Sens.:													
F.A.R:	Level: 17m UE: <.01 FAI: 1.000													
Comment: Flat V Crump profile weir in confined concrete channel to 1.775m, with concrete wall above as a flood barrier. Weir operates to 0.41m and needs regular cleaning. Weed growth may cause drowning in summer if not controlled. Higher flows are c/m gauged; portable ultrasonic gauge installed to refine calibration. # Catchment to E of Lancaster draining steep moors of Littledale. Solid geology: Millstone Grit, mostly covered with Boulder Clay with hill peat at highest altitudes.		1996	972	80	463	60	0.42	12.1	05/11	0.04	05/08	1.1	0.19	0.06
		1997	1139	93	610	80	0.55	17.0	05/05	0.05	18/08	1.5	0.20	0.07
		1998	1387	114	870	113	0.79	23.1	27/10	0.08	31/05	1.7	0.47	0.12
		1999	1219	100	731	95	0.66	14.1	02/03	0.06	05/09	1.5	0.38	0.09
		2000	1605	131	1085	141	0.98	24.8	30/10	0.07	28/06	2.4	0.55	0.10
072015	**Lune at Lunes Bridge** C.A: 141.5 km^2	**79..95**	**1698**		**1376**		**6.18**	**456.3**	**20/12 1985**	**0.18**	**25/07 1984**	**14.9**	**3.00**	**0.47**
M.A: EA	Local No: 722242 Sens.:													
F.A.R: N	Level: m UE: <.01 FAI: 0.998													
Comment: Non-standard, compound bed control built into the invert of a road bridge. Erosion renders low flows suspect. Gauging by wading and cableway (150m u/s - far enough to raise doubts about high flow calibration. Natural catchment, replaces Tebay (72010). # High relief, wet moorland catchment on Carboniferous L'st. About 20% of the catchment covered by Boulder Clay.		1996	1142	67	867	63	3.88	191.9	05/11	0.32	23/09	9.2	1.86	0.40
		1997	1581	93	1215	88	5.45	244.1	17/02	0.44	12/08	13.6	1.79	0.60
		1998	1921	113	1650	120	7.40	188.1	24/10	0.72	08/10	16.9	4.27	0.96
		1999	1928	114	1566	114	7.03	306.6	05/01	0.57	12/08	16.3	3.42	0.73
		2000	2245	132	1887	137	8.44	243.4	11/01	0.53	27/07	21.1	4.01	0.84
072005	**Lune at Killington New Bridge** C.A: 219.0 km^2	**69..95**	**1629**		**1422**		**9.88**	**627.5**	**21/12 1985**	**0.41**	**29/06 1974**	**24.3**	**4.60**	**0.79**
M.A: EA	Local No: 722421 Sens.: 10.1 S/full: 97.0m^3s^{-1}													
F.A.R: N	Level: 83m UE: <.01 FAI: 0.999													
Comment: Bazin type compound broad-crested weir. Skew flow caused by off-centre notch causes varying head across the section; that and siltation influences the rating. Stilling well leakage until 2/88., Fully contained. Above 1.6m (weir full) extrapolation of theoretical rating to bankfull (4.0m). Natural catchment. # Wet, high relief catchment. Silurian slates to the W, Carb. conglomerate and L'st N and E. Peat moss on high moors to NW, heather moss in N. Lower valleys are Boulder Clay covered. Moorland, grass, arable farming		1996	1172	72	945	66	6.55	323.7	05/11	0.57	22/09	16.2	3.18	0.72
		1997	1584	97	1371	96	9.52	431.5	17/02	0.70	20/08	24.6	2.99	1.00
		1998	1958	120	1873	132	13.01	340.8	26/10	1.25	08/10	30.1	7.19	1.65
		1999	1940	119	1784	125	12.39	**667.1**	**05/01**	1.03	12/08	27.4	5.52	1.29
		2000	2284	140	2177	153	15.08	466.2	11/01	0.94	27/07	39.1	6.85	1.43
072011	**Rawthey at Brigg Flatts** C.A: 200.0 km^2	**68..95**	**1778**		**1466**		**9.30**	**744.2**	**31/01 1995**	**0.31**	**29/06 1992**	**23.7**	**3.66**	**0.62**
M.A: EA	Local No: 723423 Sens.: 5.7													
F.A.R: N	Level: 84m UE: <.01 FAI: 1.000													
Comment: Natural channel, approx 30m wide, well contained within rock banks and a wall, with a rock bed control. Cableway removed 9/75, so no good high range gaugings since. Stilling well siltation problems. Low and high range rating not good. Early record contains many gaps. Natural catchment, very flashy. # High relief moorland catchment draining Carboniferous L'st and Millstone Grit. Peat on highest moors, Boulder Clay on lower slopes and in valleys.		1996	1318	74	889	61	5.62	298.2	05/11	**0.31**	**25/07**	16.8	1.74	0.38
		1997	1610	91	1224	83	7.77	422.9	19/02	**0.19**	**20/08**	22.0	1.35	0.31
		1998	2052	115	1661	113	10.54	314.4	24/10	0.30	01/06	27.3	4.58	0.61
		1999	2036	115	1642	112	10.41	512.6	05/01	0.27	12/08	23.4	3.57	0.38
		2000	2423	136	2014	137	12.74	399.7	11/01	0.27	27/07	36.1	4.48	0.43
072009	**Wenning at Wennington** C.A: 142.0 km^2	**76..95**	**1334**		**1002**		**4.51**	**265.3**	**01/10 1981**	**0.12**	**23/08 1995**	**11.2**	**1.74**	**0.26**
M.A: EA	Local No: 724326 Sens.: 17.5													
F.A.R: G	Level: 39m UE: <.01 FAI: 0.997													
Comment: Flat V Crump profile weir. River well contained, stable rating. No permanent cableway. Algal growth and u/s siltation need regular attention. Gw abstraction for agriculture from the Millstone Grit aquifer. # Coal Measures and Millstone Grit faulted against Carboniferous L'st, small area of impervious Silurian slate in extreme east. Boulder Clay over most of catchment with some alluvium and hill peat. Rural; agricultural with heather moor in S.		1996	1000	75	565	56	2.54	103.8	05/11	0.21	22/09	6.1	1.07	0.26
		1997	1213	91	779	78	3.51	133.9	19/02	0.22	17/08	9.5	1.05	0.29
		1998	1488	112	1065	106	4.79	128.6	24/10	0.34	01/06	10.6	2.33	0.52
		1999	1453	109	1050	105	4.73	181.4	06/12	0.28	05/09	11.5	1.84	0.34
		2000	1761	132	1410	141	6.33	189.5	30/10	0.26	30/07	16.2	2.83	0.41

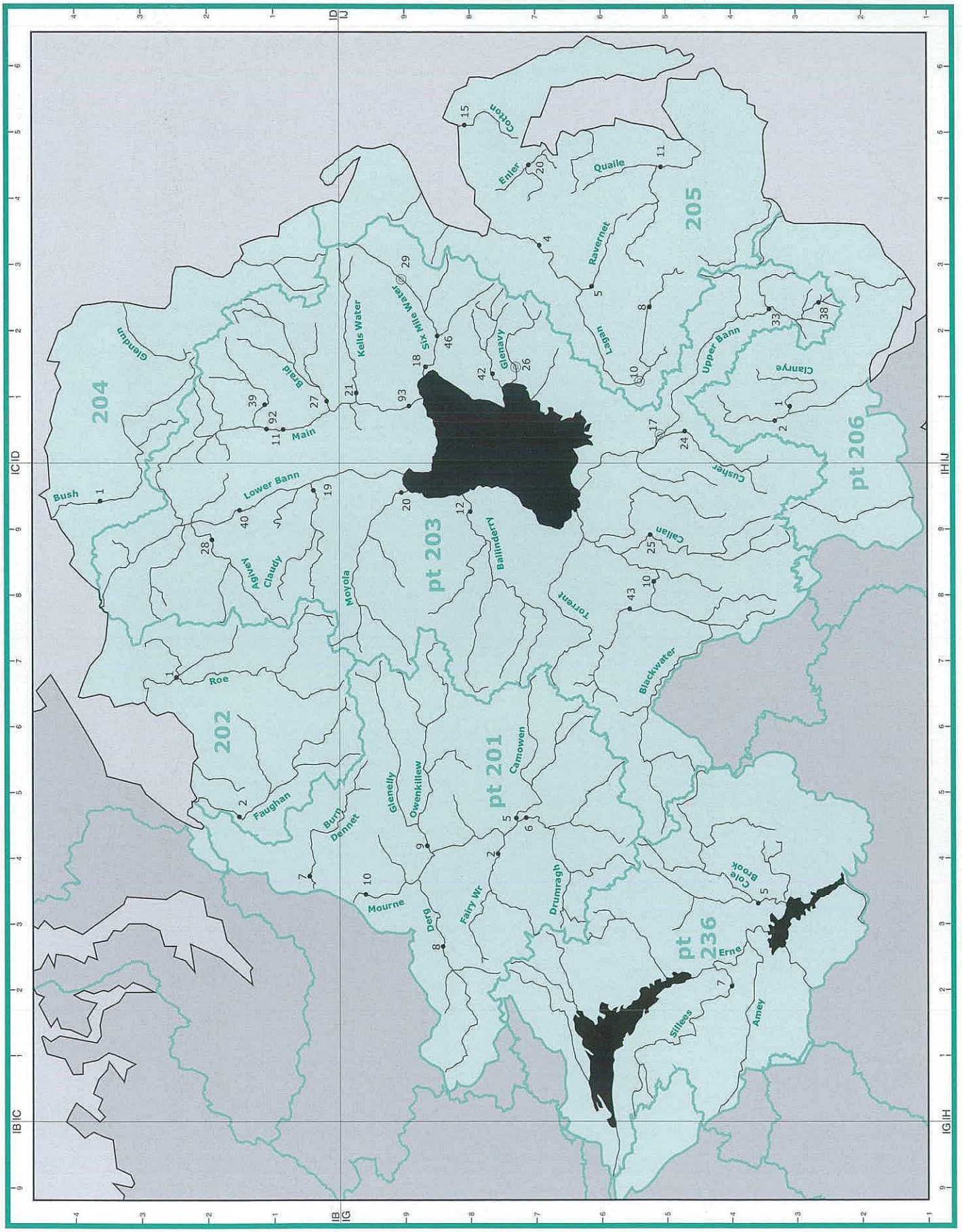
				Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
072004	**Lune at Caton**		C.A: 983.0 km^2	**59-95**	*1519*		**1134**		**35.36**	**1182.0**	**31/01 1995**	**1.16**	**25/08 1984**	**86.2**	**17.25**	**3.05**
M.A: EA	Local No: 724629	Sens.: 4.8	B/full: 329.0m^3s^{-1}													
F.A.R: SRP	Level: 11m	UE: <.01	FAI: 0.993													
Comment: Compound broad-crested weir operated after 10/6/77 as full-range station. Previously used for low/medium flows; high flows from Halton 3km d/s. High flows inundate wide floodplain. Transfers to R. Wyre under Lancashire Conjunctive Use Scheme. Major abstractions for PWS. Flood warning site. # Headwaters rise from Shap Fell and the Pennines. Mixed geology: Carboniferous Limestone; Silurian shales; Millstone Grit and Coal Measures, substantial Drift cover. Agriculture in valleys; grassland rising to peat moss in highest areas.				1996	1139	75	734	65	22.81	494.0	05/11	2.12	24/09	54.3	11.43	2.78
				1997	1411	93	972	86	30.28	639.6	17/02	2.35	20/08	79.6	10.38	3.15
				1998	1761	116	1377	121	42.92	510.5	24/10	4.34	01/06	95.5	25.71	6.69
				1999	1740	115	1288	114	40.16	877.4	05/01	4.14	06/09	86.3	21.15	5.24
				2000	2073	136	1626	143	50.54	782.4	11/01	2.97	27/07	133.5	25.92	5.21
073015	**Keer at High Keer Weir**		C.A: 48.0 km^2	**76..95**	**1158**		**362**		**0.55**	**23.9**	**31/01 1995**	**0.02**	**27/08 1976**	**1.3**	**0.26**	**0.06**
M.A: EA	Local No: 733020	Sens.:														
F.A.R:	Level: 8m	UE: <.01	FAI: 0.986													
Comment: Original open channel section superseded by Crump profile Flat V (1:10) weir, 3.5m wide, set in vertical wing walls, circa 1m high, in 1971. Structure performs well, all flows contained within bank. Rather flashy regime from natural catchment. # NE-SW trending catchment formed from series of ridges of moderate relief. Solid geology: Carboniferous L'st but dominated by glacial deposits; Boulder Clay with glacial sands and gravel and alluvium on valley floor. Wholly rural with subordinate forest plantations.				1996	832	72	231	64	0.35	14.4	05/11	0.05	05/08	0.8	0.17	0.06
				1997	1022	88	341	94	0.52	15.1	17/02	0.04	19/08	1.3	0.18	0.05
				1998	1343	116	522	144	0.79	16.4	24/10	0.10	27/05	1.7	0.47	0.14
				1999	1245	108										
				2000	1582	137	694	192	1.05	26.5	11/01	0.08	27/07	2.4	0.49	0.10
073008	**Bela at Beetham**		C.A: 131.0 km^2	**69..95**	**1320**		**846**		**3.52**	**56.9**	**21/11 1980**	**0.29**	**07/08 1989**	**8.4**	**2.05**	**0.50**
M.A: EA	Local No: 731013	Sens.: 13.8	S/full: 22.2m^3s^{-1}													
F.A.R: SG	Level: 11m	UE: <.01	FAI: 0.965													
Comment: Flat V Crump profile weir, 1:20 cross-slope. Top of wing walls 0.917m. Velocity-area for medium/high flows, no permanent cableway. Bankfull 1.188m, no bypassing. Severe, algal and weed problems. Minor compensation discharge from headwater reservoirs. Gw abstractions. # Predominantly Silurian slate with Carboniferous L'st in lower reaches. Boulder Clay covers 70% catchment, giving rise to arable farming and permanent grassland. Rest is rough grazing.				1996	999	76	539	64	2.23	27.4	05/11	0.44	19/08	5.1	1.31	0.49
				1997	1138	86	668	79	2.78	35.4	17/02	0.43	28/08	6.7	1.17	0.48
				1998	1547	117	1105	131	4.59	30.0	24/10	0.60	01/06	9.5	3.36	0.86
				1999	1381	105	899	106	3.73	80.1	05/01	0.48	05/09	7.9	2.24	0.61
				2000	1720	130	1262	149	5.23	53.3	11/01	0.52	27/07	11.8	3.20	0.69
073003	**Kent at Burneside**		C.A: 73.6 km^2	**81..95**	**1964**		**1741**		**4.06**	**112.2**	**31/01 1995**	**0.07**	**21/09 1995**	**9.2**	**1.93**	**0.26**
M.A: EA	Local No: 730102	Sens.: 12.5														
F.A.R:	Level: m	UE:	FAI:													
Comment: Natural channel, no permanent cableway, gauging by wading up to 0.8m, high flows by temporary cableway. Full range of flows contained. Station closed in 1999. # Impervious Lower Palaeozoic slate; flagstone and shale covered in middle reaches of valleys by Boulder Clay which supports permanent grassland, remainder for grazing. Rises in the mountainous Lake District - steep descent to Kendal.				1996	1454	74	1103	63	2.57	53.1	05/11	0.13	23/09	6.0	1.53	0.25
				1997	1719	88	1228	71	2.87	69.7	17/02	0.20	18/08	7.8	1.23	0.33
				1998	2239	114	1814	104	4.23	62.8	24/10	0.43	08/10	9.2	2.87	0.59
				1999	1915	98										
				2000	2412	123										
073009	**Sprint at Sprint Mill**		C.A: 34.6 km^2	**76..95**	**2180**		**1715**		**1.88**	**58.2**	**20/12 1985**	**0.06**	**26/08 1984**	**4.5**	**1.04**	**0.14**
M.A: EA	Local No: 730203	Sens.: 24.5	S/full: 8.6m^3s^{-1}													
F.A.R: N	Level: 58m	UE: <.01	FAI: 1.000													
Comment: Flat V Crump profile weir for low and medium flows (up to 0.62m). Predominantly natural flow regime, slightly influenced by discharges from Garnett Bridge Straining Plant 4km u/s. Flood warning station for Kendal. # High relief, very wet catchment drains an area of peat moss growing on Borrowdale Volcanics in extreme north, through grazing lands on Silurian and Ordovician slate, flags and shales to Boulder Clay covered lower reaches.				1996	1542	71	1222	71	1.34	48.4	28/09	0.09	23/09	3.4	0.69	0.14
				1997	1874	86	1471	86	1.61	53.0	17/02	0.12	19/08	4.2	0.73	0.19
				1998	2462	113	2066	120	2.27	40.5	24/10	0.17	08/10	4.9	1.44	0.26
				1999	2088	96	1787	103	1.94	56.6	05/01	0.17	12/08	4.5	1.06	0.23
				2000	2634	121	2293	134	2.51	43.1	28/11	0.14	27/07	6.3	1.39	0.23
073011	**Mint at Mint Bridge**		C.A: 65.8 km^2	**70..95**	**1623**		**1143**		**2.38**	**70.8**	**21/12 1985**	**0.05**	**26/08 1984**	**5.9**	**1.29**	**0.19**
M.A: EA	Local No: 730404	Sens.: 15.9														
F.A.R: N	Level: 50m	UE: <.01	FAI: 1.000													
Comment: Flat V Crump profile weir, 0.837m weir full. Stable rating. Natural catchment, however, flow slightly affected by Meal Bank mill sluice operation from 21/7/67 to 3/1/69 and periodic releases from sludge disposal works. Gaps in record: 1977,78,80 and 89. # Steep, very wet catchment. Predominantly impervious Silurian slate with bands of flags and shale, small patches of Carboniferous L'st and basal conglomerate, patchy Boulder Clay cover in middle and lower reaches. Sheep grazing with peat moorland in extreme north.				1996	1183	73	812	71	1.69	44.4	05/11	0.14	19/08	4.1	0.91	0.16
				1997	1417	87	981	86	2.05	68.2	17/02	0.13	19/08	5.1	0.76	0.18
				1998	1910	118	1505	132	3.14	52.0	26/10	0.31	08/10	6.9	2.01	0.44
				1999	1718	106	1276	112	2.66	108.5	05/01	0.24	24/08	6.1	1.42	0.33
				2000	2150	132	1710	150	3.56	70.8	11/01	0.19	27/07	8.8	1.82	0.30
073005	**Kent at Sedgwick**		C.A: 209.0 km^2	**68..95**	**1753**		**1336**		**8.85**	**282.9**	**21/12 1985**	**0.43**	**25/08 1984**	**21.0**	**5.03**	**1.10**
M.A: EA	Local No: 730511	Sens.:	S/full: 85.0m^3s^{-1}													
F.A.R: IN	Level: 19m	UE: .01	FAI: 0.984													
Comment: Compound broad-crested weir, 27m wide with 3m low flow notch, widened to 9.16m on 22/10/94. Occasional weed growth problems. Permanent cableway for medium to high flows. Flashy, with widely fluctuating flows. Station rerated from 1/1/76. Predominantly natural. # High relief catchment drains impervious Pre-Cambrian to Silurian rocks where heather moorland and peat predominate. Carboniferous Limestone provides good grazing, especially south of Kendal on Drift cover.				1996	1310	75	968	72	6.40	140.2	05/11	0.71	23/09	14.8	3.96	0.92
				1997	1554	89	1145	86	7.59	223.5	17/02	0.85	18/08	19.7	3.30	1.14
				1998	2062	118	1706	128	11.31	169.8	24/10	1.40	08/10	24.1	7.71	1.86
				1999	1790	102	1445	108	9.57	309.1	05/01	1.14	12/08	21.8	5.49	1.49
				2000	2249	128	1928	144	12.74	206.0	11/01	0.99	27/07	30.1	7.17	1.63
073014	**Brathay at Jeffy Knotts**		C.A: 57.4 km^2	**76..95**	**2944**		**2392**		**4.35**	**71.5**	**31/01 1995**	**0.01**	**02/09 1976**	**10.9**	**2.29**	**0.27**
M.A: EA	Local No: 735123	Sens.:														
F.A.R:	Level: 42m	UE: <.01	FAI: 0.922													
Comment: Velocity area station. Bed dredged between 19-24/7/94 causing water levels to fall by approx. 0.2m. Flows affected by weed growth and heavily vegetated banks. Natural catchment. # Steep, very wet moorland catchment, draining Langdale Fell. Solid geology: Silurian and Ordovician volcanic tuffs and lavas, much exposed at outcrop. Some hill peat and Boulder Clay cover.				1996	2265	77	1729	72	3.14	44.9	28/09	0.15	23/09	8.6	1.68	0.28
				1997	2785	95	2035	85	3.70	49.8	17/02	0.29	05/06	10.0	1.81	0.41
				1998	3387	115	2741	115	4.99	53.9	11/02	0.35	08/10	12.1	3.44	0.49
				1999	3077	105	2567	107	4.67	67.6	06/12	0.41	12/08	11.0	2.80	0.60
				2000	3496	119	3052	128	5.54	56.7	02/03	0.38	15/05	13.5	3.26	0.53
073013	**Rothay at Miller Bridge House**		C.A: 64.0 km^2	**76..95**	**2495**		**2108**		**4.28**	**206.5**	**01/01 1991**	**0.09**	**26/08 1976**	**10.3**	**2.23**	**0.32**
M.A: EA	Local No: 735022	Sens.:	B/full: 80.0m^3s^{-1}													
F.A.R: N	Level: 41m	UE: <.01	FAI: 0.867													
Comment: Velocity area station. Initially a loose boulder control, but rating was unstable because of the mobile bed. Data quality poor. A wooden low flow control was installed 2/91 but deteriorating (2002). Flood berm on lb. High flows not contained (flows down road and across field). Gaugings taken 170m d/s or by wading. Natural catchment, contains Rydal Water and Grasmere. # Steep, wet catchment draining Silurian shales, s'sts and mudstones, virtually drift-free. Immediately d/s of Ambleside.				1996	1989	80	1509	72	3.05	94.3	28/09	0.20	17/09	7.5	1.60	0.26
				1997	2380	95	1839	87	3.73	108.9	17/02	0.32	22/07	9.3	1.62	0.43
				1998	2879	115	2362	112	4.79	72.8	24/10	0.33	27/05	11.0	2.99	0.52
				1999	2707	108	2179	103	4.42	76.4	05/01	0.31	11/08	11.1	2.48	0.52
				2000	3242	130	2694	128	5.45	68.1	11/01	0.26	30/07	13.4	3.00	0.52
073006	**Cunsey Beck at Eel House Bridge**		C.A: 18.7 km^2	**76..95**	**2001**		**1511**		**0.90**	**17.8**	**03/01 1982**	**0.00**	**01/09 1978**	**2.2**	**0.45**	
M.A: EA	Local No:	Sens.:														
F.A.R: N	Level: 63m	UE:	FAI:													
Comment: VA station in an artificially straightened reach. Wooden sleeper low flow control (not for the early record), no cableway; bridge gauging used for high flows. Suffers from heavily weeded channel. The bulk of the catchment drains through Esthwaite Water. # Steep, wet catchment draining Silurian shales, mudstones and s'sts. Minor superficial deposits. Westerly tributary to Windermere.				1996	1553	78	1135	75	0.67	6.2	05/11	0.03	23/09	1.7	0.42	0.06
				1997	1759	88	1306	86	0.77	7.8	17/02	0.06	22/07	2.0	0.34	0.10
				1998	2268	113	1978	131	1.17	7.8	24/10	0.10	08/10	2.5	0.81	0.16
				1999	2074	104	1578	104	0.94	8.8	06/01	0.10	05/09	2.1	0.57	0.13
				2000	2565	128	2202	146	1.30	8.3	28/11	0.07	27/07	3.2	0.73	0.14
073010	**Leven at Newby Bridge FMS**		C.A: 247.0 km^2	**39-95**	*2164*		**1767**		**13.84**	**135.8**	**02/12 1954**	**0.11**	**07/10 1972**	**31.0**	**10.00**	**1.21**
M.A: EA	Local No: 735430	Sens.:	S/full: 140.0m^3s^{-1}													
F.A.R: SPE	Level: 37m	UE:	FAI:													
Comment: Level record since 1939 from four different sites at Newby Bridge. All flow records from 1939 to 1974 combined into a single sequence. Since 5/5/71 compound Crump profile weir. Full-range. Just d/s of Lake Windermere (for which earlier level data are available)- highly regulated, compensation flow - occasional very low flows (e.g. autumn 1972) when u/s fish pass closed. Major abstractions for PWS. # Predominantly impervious, Borrowdale Volcanics in north and Silurian slate in south. Boulder Clay along river valleys. Mainly grassland, very wooded in lower reaches.				1996	1758	81	1178	67	9.20	53.9	06/11	0.89	03/02	25.0	5.54	1.07
				1997	2088	96	1491	84	11.68	83.5	19/02	1.27	06/06	30.9	5.96	1.73
				1998	2601	120	2188	124	17.14	82.1	25/10	1.30	08/10	33.7	14.42	2.54
				1999	2360	109	1937	110	15.17	96.4	06/12	1.49	12/08	31.6	10.95	2.55
				2000	2843	131	2468	140	19.27	85.5	13/12	1.14	26/07	48.6	12.96	2.39

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
073002	**Crake at Low Nibthwaite** C.A: 73.0 km^2	**63..95**	**2167**		**1734**		**4.01**	**35.4**	**03/01 1982**	**0.07**	**07/10 1972**	**8.6**	**2.89**	**0.54**
M.A: EA	Local No: 737537 Sens.: 17.1 B/full: 37.0m^3s^{-1}													
F.A.R: SP	Level: 39m UE: <.01 FAI: 0.737													
Comment: Open stone walled channel with informal Flat V triangular weir control. Stable rating, full-range of flows contained. Permanent cableway. Minimal weed growth. Lowest flows unreliable. Headwater abstractions for PWS. Approx. 2km d/s of Lake Coniston - hence subdued hydrograph variation. # Predominantly impervious Silurian Ludlow slates with thin Carboniferous Coal Measures. Band of Boulder Clay over centre of catchment. Mountains in N supporting rough pasture and moorland, remainder grassland.		1996	1716	79	1293	75	2.99	16.7	05/11	0.27	23/09	6.4	2.34	0.59
		1997	1936	89	1431	83	3.31	18.5	19/02	0.57	22/07	7.5	2.21	0.76
		1998	2557	118	2195	127	5.08	25.4	26/10	0.91	31/05	9.3	4.51	1.40
		1999	2291	106	1889	109	4.37	26.7	06/12	0.81	12/08	8.6	3.22	1.13
		2000	2704	125	2423	140	5.59	22.9	28/11	0.73	30/07	12.4	4.05	1.03
074008	**Duddon at Ulpha** C.A: 47.9 km^2	**76..95**	**2571**		**2007**		**3.05**	**93.2**	**30/10 1977**	**0.03**	**29/08 1976**	**7.8**	**1.51**	**0.25**
M.A: EA	Local No: 740101 Sens.: 6.9													
F.A.R: SP	Level: 76m UE: FAI:													
Comment: Non-standard compound broad-crested weir, three different crest levels of varying widths, narrowest at 0.31m, second at 0.54m and widest at 0.745m at obtuse angle to channel. No cableway, waded c/m 100m d/s of weir. Contains all flows. Major abstraction 10m u/s for Barrow PWS. Compensation flow from Seathwaite Tarn 8km u/s. # Impervious Ordovician andesitic lavas, virtually Drift free. Steeply sloping, thin soils, supporting sheep pasture.		1996	2062	80	1627	81	2.46	70.6	28/09	0.17	21/07	7.0	1.14	0.25
		1997	2325	90	1829	91	2.78	85.7	17/02	0.18	10/08	7.5	1.19	0.25
		1998	2964	115	2614	130	3.97	**94.9**	**03/08**	0.22	31/05	9.3	2.43	0.38
		1999	2677	104	2354	117	3.58	94.8	05/12	0.33	10/08	8.8	1.91	0.47
		2000	2847	111	2830	141	4.29	59.1	11/01	0.23	15/05	9.9	2.52	0.36
074001	**Duddon at Duddon Hall** C.A: 85.7 km^2	**68..95**	**2218**		**1783**		**4.84**	**257.8**	**01/01 1991**	**0.16**	**07/09 1976**	**11.8**	**2.49**	**0.43**
M.A: EA	Local No: 740102 Sens.: 14.5 B/full: 160.0m^3s^{-1}													
F.A.R: SP	Level: 15m UE: <.01 FAI: 0.986													
Comment: Compound broad-crested weir, 22.9m overall, centre crest 7m, contains all flows. Drowning improbable. High flows theoretically rated. Low flows gauged by wading. Extremely flashy runoff. Abstractions for Barrow PWS from Ulpha pumping station u/s. Variable compensation flow from Seathwaite Tarn. # Rises at Wrynose Pass, flows through sparsely populated agricultural land. Geology entirely impervious Ordovician Borrowdale Volcanics, andesitic lavas with small patches of Boulder Clay. Thin soils. Peat moss in NW.		1996	1848	83	1314	74	3.56	143.5	28/09	0.37	15/09	8.1	1.91	0.45
		1997	2031	92	1410	79	3.83	220.1	17/02	0.34	22/07	9.0	1.88	0.47
		1998	2632	119	2023	113	5.50	**326.9**	**03/08**	0.43	31/05	11.5	3.48	0.68
		1999	2328	105	1755	98	4.77	244.2	06/12	0.49	11/08	10.9	2.82	0.69
		2000	2551	115	2182	122	5.91	149.7	28/11	0.39	15/05	13.4	3.50	0.60
074007	**Esk at Cropple How** C.A: 70.2 km^2	**76..95**	**2253**		**1978**		**4.40**	**152.1**	**14/11 1980**	**0.08**	**14/08 1983**	**10.4**	**2.34**	**0.34**
M.A: EA	Local No: 742006 Sens.: 30.0													
F.A.R:	Level: 6m UE: FAI:													
Comment: Velocity-area station. Stone ford forms low/medium control approx. 50m d/s, insensitive at low flows. Waded gauging at low/medium flows, permanent cableway for high flows. # Impervious Ordovician andesitic lavas and tuffs with massive granitic intrusion, virtually Drift free. Mountainous catchment supporting rough pasture and moorland for sheep grazing, grassland in valley. Rural.		1996	1929	86	1603	81	3.56	100.1	28/05	0.14	23/09	9.4	1.82	0.32
		1997	2092	93	1849	93	4.12	105.3	16/09	0.30	22/07	10.5	1.86	0.48
		1998	2660	118	2556	129	5.69	118.7	03/08	0.41	27/05	12.6	3.56	0.64
		1999	2424	108										
		2000	2694	120	2776	140	6.16	109.7	28/11	0.26	27/07	14.2	3.52	0.48
074002	**Irt at Galesyke** C.A: 44.2 km^2	**67..95**	**2739**		**2317**		**3.25**	**47.1d**	**02/10 1968**	**0.13**	**08/05 1974**	**7.0**	**2.32**	**0.40**
M.A: EA	Local No: 743008 Sens.: 14.6 B/full: 31.0m^3s^{-1}													
F.A.R: SPI	Level: 54m UE: <.01 FAI: 0.924													
Comment: Natural channel with gabion control. Gabion modified in Sep 1968; unstable section accretes and control submerges. Fully contained. 2km d/s of Wast Water outlet which is important for PWS and major industrial purposes, greatly affecting low flows. # Entirely impervious Lower Palaeozoic rocks with Drift cover along river valley, heavy rainfall in mountains carried in short, steep rivers - rapid runoff. Sheep farming on rough pasture, with heath and moorland.		1996	2135	78	1886	81	2.64	15.0	05/11	0.24	15/09	5.8	1.87	0.42
		1997	2409	88	2206	95	3.09	23.1	16/09	0.45	06/06	6.6	2.04	0.58
		1998	2969	108	3122	135	4.38	20.9	03/08	0.54	08/10	8.1	3.77	0.92
		1999	2824	103	2648	114	3.71	26.4	06/12	0.49	12/08	6.7	2.99	0.94
		2000	3252	119	3501	151	4.89	23.8	01/02	0.47	15/05	10.5	3.44	0.76
074006	**Calder at Calder Hall** C.A: 44.8 km^2	**64..95**	**1790**		**1285**		**1.83**	**87.2**	**30/08 1989**	**0.08**	**23/08 1976**	**4.0**	**1.10**	**0.30**
M.A: EA	Local No: 743509 Sens.: 15.5 S/full: 21.0m^3s^{-1}													
F.A.R: G	Level: 26m UE: <.01 FAI: 1.000													
Comment: Flat V Crump profile weir with 1:20 cross-slope, measures low and medium flows. At very high flows could drown out but a cableway installed 2002 should capture such flow. All flows contained within bank. Flashy response. From 1/1/80 low flow augmentation by pumping from the St Bees S'st. Abstraction by BNFL ceases below 0.153m. # Upper catchment impervious Skiddaw Slates and Borrowdale Volcanics; rough grazing. Lower catchment Triassic s'st; meadow and permanent pasture. Mostly sheep farming, approx. 5% afforested.		1996	1511	84	1005	78	1.42	41.0	05/11	0.23	20/09	3.3	0.78	0.30
		1997	1575	88	1068	83	1.52	35.1	16/09	0.29	22/07	3.3	0.85	0.37
		1998	2091	117	1628	127	2.31	**108.2**	**03/08**	0.39	08/10	4.8	1.55	0.48
		1999	1833	102	1280	100	1.82	44.2	05/11	0.35	05/09	3.8	1.20	0.43
		2000	2174	121	1775	138	2.52	59.3	24/10	0.32	30/07	5.6	1.52	0.49
074003	**Ehen at Bleach Green** C.A: 44.2 km^2	**73..95**	**2626**		**1712**		**2.40**	**49.9**	**24/10 1977**	**0.12**	**22/08 1976**	**6.1**	**1.03**	**0.38**
M.A: EA	Local No: 744111 Sens.: 9.7 S/full: 41.0m^3s^{-1}													
F.A.R: SPI	Level: 110m UE: FAI:													
Comment: Compound Crump profile weir, from 1/8/73, replaced narrow flume. All flows contained. Measures flood discharge and compensation water from Ennerdale Water 800m u/s. Compensation level - 0.157m. Ennerdale Water used for PWS for West Cumbria and industrial supply to Sellafield. # 100% impervious Skiddaw Slates in NW, Borrowdale Volcanics in SE with intrusions in the centre. Mostly rough sheep grazing, forestry on Drift cover along river valley.		1996	2003	76	1299	76	1.82	19.3	05/11	0.40	21/09	4.2	0.76	0.44
		1997	2281	87	1594	93	2.23	47.8	16/09	0.41	31/01	6.1	0.72	0.44
		1998	2830	108	2358	138	3.31	39.9	03/08	0.47	07/10	7.3	2.31	0.54
		1999	2817	107	2101	123	2.94	38.1	06/12	0.51	10/08	6.2	1.80	0.59
		2000	3083	117	2759	161	3.86	33.9	11/01	0.50	27/07	8.7	2.35	0.60
074005	**Ehen at Braystones** C.A: 125.5 km^2	**74-95**	**1812**		**1277**		**5.08**	**115.9**	**30/10 1977**	**0.43**	**02/09 1976**	**11.8**	**2.90**	**0.84**
M.A: EA	Local No: 744312 Sens.: 14.6													
F.A.R: SP	Level: 10m UE: .01 FAI: 0.899													
Comment: Initially a VA station with unstable rating - gravel bar low flow control. Non-standard flat vee control installed 1997. Some weed growth problems. Bypassed in extreme floods. Low flows dominated by compensation from Ennerdale Water; major exports. Unreliable flows (due to weir building) 20/2-17/3/97. # Upper catchment; in east: impervious Borrowdale Volcanics, in west: Skiddaw Slates, overlain in NW by Carboniferous Limestone, Coal Measures and patches of Permo-Triassic s'st. Drift covered. Some urban development in lower catchment, middle reaches arable, remainder sheep pasture.		1996	1447	80	1017	80	4.04	66.0	05/11	1.05	24/06	9.1	2.31	1.16
		1997	1553	86	1027	80	4.09	75.8	16/09	0.69	25/02	9.8	1.88	0.95
		1998	2035	112	1645	129	6.55	89.2	03/08	1.06	21/06	14.0	4.78	1.28
		1999	1902	105	1396	109	5.56	103.9	05/11	1.09	05/09	11.3	3.75	1.25
		2000	2195	121	1799	141	7.14	70.6	27/09	1.05	27/07	15.9	4.94	1.33
075007	**Glenderamackin at Threlkeld** C.A: 64.5 km^2	**69..95**	**1686**		**1396**		**2.86**	**83.2**	**18/10 1987**	**0.04**	**26/08 1976**	**6.8**	**1.38**	**0.23**
M.A: EA	Local No: 750504 Sens.: 27.0 B/full: 75.0m^3s^{-1}													
F.A.R:	Level: 136m UE: <.01 FAI: 1.000													
Comment: VA station set in gently curved reach, with basket gabion low flow control; non-standard concrete control installed 4/1998. Channel approx. 13m wide, cableway span 27m. Closed from Jun 81 to Jan 86. Control deteriorates regularly. Data quality poor (based on pre-closure rating), but revision of rating history should improve record. Natural catchment. # High relief catchment in N Lake District; broad main valley below 200m, flanking fells exceed 700m. Geology: principally Skiddaw Slates, with Borrowdale volcanics on southern watershed and granite boss S of gauge. Valley floor alluvium filled. Rural and moorland.		1996	1284	76	1392	100	2.84	62.4	05/11	0.66	22/09	6.4	1.66	0.85
		1997	1642	97	1780	128	3.64	61.8	19/02	0.83	24/06	8.4	1.87	0.97
		1998	1943	115										
		1999	2127	126										
		2000	2196	130										
075001	**St Johns Beck at Thirlmere Reservoir** C.A: 42.1 km^2	**35..95**	**2667**		**622**		**0.83**	**96.4**	**31/01 1995**	**0.07**	**28/10 1975**	**1.9**	**0.21**	**0.15**
M.A: EA	Local No: 750605 Sens.: 12.9													
F.A.R: SP	Level: 160m UE: FAI:													
Comment: Rectangular thin-plate weir replaced by compound Crump profile weir, approx. 1km d/s of Thirlmere Res. on 1/1/73. Measures compensation and flood spill discharges from Thirlmere Res. Modular limit approx. 0.75m. Naturalised monthly flows from 1964 to 1966. # Catchment composed entirely of impervious Ordovician Borrowdale Volcanics, runoff from these into the reservoir is rapid. Rock outcrop, rough pasture with heather. Sheep grazing, some forestry.		1996	2200	82	154	25	0.21	1.1	05/11	0.17	20/10	0.2	0.19	0.17
		1997	2495	94	278	45	0.37	11.5	01/03	0.17	27/06	0.2	0.19	0.18
		1998	3009	113	560	90	0.75	13.1	26/10	0.17	18/10	2.1	0.19	0.18
		1999	2997	112	630	101	0.84	34.3	05/01	0.18	16/02	1.9	0.21	0.18
		2000	3410	128	1071	172	1.43	27.8	05/12	0.17	25/01	4.6	0.22	0.18
075009	**Greta at Low Briery** C.A: 145.6 km^2	**71..95**	**1982**		**1092**		**5.04**	**202.7**	**21/12 1985**	**0.36**	**17/07 1989**	**12.2**	**2.61**	**0.62**
M.A: EA	Local No: 750806 Sens.: 10.0													
F.A.R: S	Level: 100m UE: <.01 FAI: 0.919													
Comment: Velocity-area station with a berm acting as a control where the channel divides and the gradient steepens. Permanent cableway. All flows contained. Thirlmere Res. regulates catchment. Station primarily level only from June 1999. # Entirely rural catchment with sheep farming predominating on the rough pasture. Geology: impervious Ordovician Skiddaw Slates, Borrowdale Volcanics and some igneous intrusions, Boulder Clay covered below 200m. Moorland on high ground.		1996	1594	80	692	63	3.19	72.8	05/11	0.40	23/09	7.7	1.74	0.48
		1997	1912	96	932	85	4.30	128.2	19/02	0.59	24/06	10.1	1.74	0.77
		1998	2279	115	1238	113	5.72	88.1	24/10	0.82	08/10	12.8	3.27	1.13
		1999	2393	121	1370	125	6.32	105.8	05/01	0.69	05/09	15.3	3.21	0.89
		2000	2607	132	1653	151	7.61	114.6	05/12	0.82	08/08	19.4	3.28	0.95

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
075005	**Derwent at Portinscale** C.A: 235.0 km^2	**72..95**	**2251**		**1594**		**11.88**	**155.1**	**26/11 1979**	**0.00**	**17/07 1984**	**28.7**	**6.99**	**1.19**
M.A: EA	Local No: 751007 Sens.: 5.9													
F.A.R: S	Level: 73m UE: <.01 FAI: 0.852													
Comment: Velocity-area station with permanent cableway. No stable bed control - shifting ratings, particularly at the low end. Medium and high flow ratings more stable. Station bypassed on rb in extreme floods. Affected by controlled releases from Derwent Water, immediately u/s. # Mainly Borrowdale Volcanic series with Skiddaw Slates in the north and igneous intrusions east of Keswick. Extensively Drift covered except extreme southern upland area. Grasslands along river valley, remainder heather and moorland.		1996	1795	80	1113	70	8.27	82.2	05/11	0.73	23/09	20.9	4.87	1.20
		1997	2197	98	1460	92	10.88	111.1	17/02	1.45	17/06	26.9	5.13	1.81
		1998	2606	116	1892	119	14.10	96.9	24/10	1.67	08/10	30.7	10.26	2.52
		1999	2618	116	1962	123	14.62	110.6	05/01	1.56	12/08	35.7	9.20	2.35
		2000	2854	127	2285	143	16.98	100.6	12/12	1.51	30/07	41.4	9.12	2.38
075003	**Derwent at Ouse Bridge** C.A: 363.0 km^2	**68..95**	**2029**		**1430**		**16.46**	**124.1**	**22/12 1985**	**0.30**	**26/07 1984**	**38.9**	**10.61**	**1.76**
M.A: EA	Local No: 751110 Sens.: 12.3 B/full: 140.0m^3s^{-1}													
F.A.R: SP	Level: 68m UE: FAI:													
Comment: Velocity-area station with permanent cableway immediately d/s of Bassenthwaite Lake. Low flow control approx. 120m d/s is artificial pipe at the u/s end of an island. Island becomes control at higher flows. Substantial exports. Rarely overtopped. Derwent Water and Thirlmere Reservoir moderate the effect of flood discharges in the lower Derwent. # Catchment entirely on impervious Lower Palaeozoic rocks supporting mainly rough pasture and moorland. Drift confined to valley floor. Entirely rural.		1996	1622	80	994	70	11.41	66.9	06/11	1.02	23/09	28.5	7.04	1.62
		1997	1995	98	1286	90	14.81	104.9	19/02	2.12	18/06	36.8	7.51	2.50
		1998	2371	117	1756	123	20.22	96.1	25/10	2.94	08/10	42.4	14.81	4.06
		1999	2421	119	1864	130	21.46	110.6	06/01	2.63	12/08	50.0	14.34	3.67
		2000	2631	130	2131	149	24.46	109.4	13/12	2.31	30/07	58.4	13.69	3.64
075016	**Cocker at Scalehill** C.A: 64.0 km^2	**76..95**	**2360**		**1698**		**3.44**	**68.9**	**09/03 1989**	**0.08**	**03/07 1988**	**8.3**	**2.09**	**0.34**
M.A: EA	Local No: 751612 Sens.: 5.8													
F.A.R: S	Level: 95m UE: FAI:													
Comment: Non-standard compound weir with flume centre section. Stable rating to bankfull (1.215m); above this structure completely drowned, flow over both banks. No permanent cableway. D/s of Crummock Water - flow regulated, mostly compensation at low flows. 29/10 - 7/11/97 dmfs suspect due to vandalism and repair of sluice gates at Crummock. # Entirely rural, heathland, moorland and rough pasture over impervious Ordovician Skiddaw Slates and Borrowdale Volcanics. Substantial outcrop of granitic intrusion. Drift covered to the elevation of Crummock Water.		1996	1764	75	1402	83	2.84	43.0	05/11	0.34	01/01	6.5	1.41	0.39
		1997	2113	90	2029	119	4.12	146.5	16/09	0.37	13/06	10.7	1.36	0.41
		1998	2577	109	2566	151	5.21	46.8	24/10	0.41	06/10	11.9	3.22	0.69
		1999	2652	112	2664	157	5.41	133.8	05/01	0.39	10/08	11.4	2.69	0.57
		2000	2792	118	3227	190	6.53	87.6	12/01	0.42	27/07	16.7	3.10	0.55
075004	**Cocker at Southwaite Bridge** C.A: 116.6 km^2	**67..95**	**1992**		**1412**		**5.22**	**84.7**	**31/10 1977**	**0.20**	**05/07 1988**	**12.5**	**3.08**	**0.63**
M.A: EA	Local No: 751613 Sens.: 20.1 B/full: 130.0m^3s^{-1}													
F.A.R: SP	Level: 60m UE: <.01 FAI: 0.832													
Comment: Velocity-area station with cableway. Station control is a mill weir 137m d/s. May be insensitive at low flows. Full-range. Suffers from weed growth and minor bed movements. River sometimes responsive despite Crummock Water, Buttermere and Loweswater in catchment. # Lower Palaeozoic rocks, granitic intrusions; moorland. Mainly grazing; some arable on broad swathe of Drift in river valley.		1996	1517	76	1053	75	3.88	36.2	05/11	0.45	23/09	9.7	2.17	0.51
		1997	1838	92	1272	90	4.70	66.6	16/09	0.58	17/06	12.2	2.08	0.68
		1998	2250	113	1813	128	6.70	40.8	24/10	0.88	27/05	13.8	4.84	1.29
		1999	2321	117	1792	127	6.63	65.2	05/01	0.79	10/08	14.8	4.17	1.04
		2000	2435	122	2023	143	7.46	47.5	12/01	0.64	29/07	18.5	4.53	0.88
075002	**Derwent at Camerton** C.A: 663.0 km^2	**60..95**	***1784***		**1227**		**25.79**	**264.7**	**01/10 1968**	**1.15**	**06/09 1976**	**58.8**	**16.58**	**3.20**
M.A: EA	Local No: 753015 Sens.: 7.1 B/full: 400.0m^3s^{-1}													
F.A.R: SP	Level: 17m UE: <.01 FAI: 0.844													
Comment: Velocity-area station with permanent cableway. Full range calibration, all flows contained. Opened in 1960, reliable record since 1961. Regulated flow from Crummock Water. Controlled releases from Thirlmere Reservoir. Naturalised monthly flows from 1962 to 1967. # Source in the central Lakes massif is one of the highest rainfall locations in the UK. Upper third is moorland draining Lower Palaeozoic rocks. Drift covered valley floors support grazing and some arable farming. Contains Keswick and Cockermouth.		1996	1412	79	838	68	17.56	168.5	05/11	1.74	23/09	42.8	10.75	2.58
		1997	1710	96	1071	87	22.51	214.8	17/02	3.37	22/07	58.5	11.20	4.01
		1998	2072	116	1478	120	31.08	204.1	24/10	4.68	08/10	64.7	22.84	6.57
		1999	2103	118	1531	125	32.20	230.6	05/11	3.79	12/08	73.9	20.36	5.18
		2000	2277	128	1807	147	37.89	204.8	12/12	3.65	30/07	89.2	20.70	5.46
075017	**Ellen at Bullgill** C.A: 96.0 km^2	**76..95**	**1126**		**757**		**2.31**	**39.7**	**21/09 1985**	**0.14**	**29/07 1976**	**5.2**	**1.39**	**0.27**
M.A: EA	Local No: 754016 Sens.: 16.8 B/full: 2.1m^3s^{-1}													
F.A.R:	Level: 27m UE: <.01 FAI: 0.984													
Comment: Flat V weir to measure low flows up to 0.359m, velocity-area station for medium and high flows to bankfull. Full-range with stable rating. Permanent cableway. Suffers from slight accretion. Abstractions in headwaters. Small discharges of sewage and industrial effluent. # Steep headwaters drain Uldale Fells and flow westward. Lower reaches follow the E-W trend of the Coal Measures in broad, flat valleys, Boulder Clay covered below 200m. Lower Palaeozoic hills to the S.		1996	812	72	416	55	1.26	24.5	05/11	0.17	17/09	3.1	0.66	0.19
		1997	1028	91	584	77	1.78	32.0	04/02	0.29	01/07	4.0	0.86	0.33
		1998	1305	116	927	122	2.82	31.6	11/02	0.55	26/05	5.8	2.06	0.72
		1999	1213	108	887	117	2.70	41.0	05/01	0.36	05/09	5.7	1.58	0.44
		2000	1425	127	1094	145	3.32	39.2	11/01	0.36	08/08	7.6	1.83	0.45
076014	**Eden at Kirkby Stephen** C.A: 69.4 km^2	**71..95**	**1406**		**1153**		**2.54**	**189.4**	**02/01 1976**	**0.07**	**25/08 1976**	**6.4**	**1.02**	**0.16**
M.A: EA	Local No: 760101 Sens.: 26.1 B/full: 120.0m^3s^{-1}													
F.A.R: N	Level: 158m UE: <.01 FAI: 1.000													
Comment: Non-standard compound broad-crested weir, built to stabilise the bed and act as a low flow control. Insensitive at low flows. Cableway measures full-range. Natural catchment, the highest on the Eden. # High relief catchment draining Carboniferous L'st which forms most of the watershed. Middle reaches floored by Permian s'st. Hill peat and moorland, variable Boulder Clay cover.		1996	1144	81	765	66	1.68	69.9	05/11	0.11	23/09	4.2	0.72	0.13
		1997	1392	99	1016	88	2.24	120.9	19/02	0.12	12/08	5.8	0.63	0.18
		1998	1779	127	1366	118	3.01	83.7	24/10	0.26	27/05	7.6	1.51	0.35
		1999	1735	123	1370	119	3.02	113.8	02/12	0.16	12/08	6.9	1.26	0.23
		2000	1984	141	1650	143	3.62	86.1	19/09	0.17	27/07	9.6	1.64	0.25
076005	**Eden at Temple Sowerby** C.A: 616.4 km^2	**64..95**	**1161**		**734**		**14.34**	**346.4**	**21/12 1985**	**1.16**	**27/08 1976**	**33.1**	**7.38**	**1.90**
M.A: EA	Local No: 760502 Sens.: 8.9 B/full: 260.0m^3s^{-1}													
F.A.R:	Level: 92m UE: <.01 FAI: 1.000													
Comment: Velocity-area station with cableway. Severe summer weed growth requires numerous rating changes. Unstable gravel bed. Before May '95 floods above 3.3m inundated wide floodplain on lb. Banks then raised to contain the previous highest flood. Floods cause considerable scour and erosion. Sewage discharge d/s of Appleby. # Rural catchment except for Appleby. Boulder Clay covered Permo-Triassic s'st in main valley supports arable farming; headwaters drain Carboniferous L'st with rough grazing, moorland on highest ground.		1996	845	73	447	61	8.72	170.4	05/11	1.00	23/09	21.0	4.40	1.17
		1997	1073	92	625	85	12.22	289.7	19/02	1.30	12/08	28.3	4.36	1.72
		1998	1345	116	862	117	16.84	294.9	24/10	2.47	29/09	42.8	9.44	3.00
		1999	1304	112	835	114	16.32	276.6	15/01	1.65	12/08	38.7	7.50	2.03
		2000	1512	130	1047	143	20.41	242.8	12/01	1.83	23/07	53.4	10.61	2.19
076004	**Lowther at Eamont Bridge** C.A: 158.5 km^2	**62..95**	**1872**		**686**		**3.45**	**232.2**	**23/03 1968**	**0.36**	**27/08 1976**	**7.6**	**1.59**	**0.65**
M.A: EA	Local No: 761104 Sens.: 11.6 B/full: 175.0m^3s^{-1}													
F.A.R: S	Level: 113m UE: <.01 FAI: 0.906													
Comment: Velocity-area station with permanent cableway. All flows contained. Affected by seasonal weed growth. Strongly influenced by Haweswater and Wet Sleddale; 60% of catchment controlled. Monthly naturalised flows from Oct 1962 to Sep 1965. # 50% drains Ordovician volcanics of the peat moorland headwaters; broad band of Carboniferous L'st in middle reaches, Coal Measures and Permo-Triassic s'st lower down. Extensive Boulder Clay in valleys and lower third. Mostly grazing.		1996	1428	76	472	69	2.37	85.2	05/11	0.72	23/09	4.6	1.41	0.78
		1997	1835	98	724	106	3.64	146.1	19/02	0.78	12/08	6.4	1.25	0.86
		1998	2168	116	931	136	4.68	146.0	24/10	0.86	08/10	10.2	2.41	1.16
		1999	2044	109	893	130	4.49	123.8	15/01	0.77	16/09	10.4	1.67	0.99
		2000	2392	128	1151	168	5.77	100.3	12/12	1.02	30/08	13.3	2.58	1.22
076015	**Eamont at Pooley Bridge** C.A: 145.0 km^2	**70..95**	**2239**		**1699**		**7.81**	**74.2**	**09/03 1989**	**0.40**	**07/09 1976**	**17.7**	**4.88**	**0.91**
M.A: EA	Local No: 761605 Sens.: 11.8 S/full: 46.9m^3s^{-1}													
F.A.R: SP	Level: 144m UE: FAI:													
Comment: Compound Crump profile weir 29.3m wide with low crest 9.1m wide. Crest tapping installed as drowning was expected, but rarely drowns, crest tapping not used. Just d/s of Ullswater - variable compensation releases from here and Haweswater. # Lower Palaeozoic shales and grits forming core of the Lake District dome where sheep grazing on rough pasture predominates. Some arable in lower reaches, moorland on high ground. Some Boulder Clay cover.		1996	1733	77	939	55	4.31	34.8	06/11	0.62	23/09	11.6	1.45	1.07
		1997	2149	96	1531	90	7.04	73.5	19/02	1.37	26/08	16.3	3.23	1.60
		1998	2496	111	2046	120	9.41	60.5	24/10	1.48	27/05	18.9	6.65	1.93
		1999	2463	110	2010	118	9.24	56.2	09/12	1.40	12/08	22.4	5.76	1.73
		2000	2618	117	2363	139	10.84	65.9	12/12	1.22	30/07	24.1	6.02	1.85
076003	**Eamont at Udford** C.A: 396.2 km^2	**61..95**	**1844**		**1185**		**14.89**	**299.9**	**23/03 1968**	**0.45**	**25/08 1984**	**32.2**	**9.32**	**2.25**
M.A: EA	Local No: 762006 Sens.: B/full: 320.0m^3s^{-1}													
F.A.R: S	Level: 91m UE: <.01 FAI: 0.865													
Comment: Velocity-area station. Permanent cableway 120m u/s of recorder, wading d/s for low flows. All flows contained. Short term ratings derived because of weed growth. Artificially influenced by Ullswater, Haweswater and Wet Sleddale. Naturalised monthly flows 1962-1965. # 65% drains Ordovician volcanics of peat moorland headwaters; broad band of Carboniferous L'st in middle reaches; Coal Measures and Permo-Triassic s'st nearer station. Extensive Boulder Clay in valleys and lower reaches. Mostly grazing.		1996	1403	76	671	57	8.40	136.2	05/11	1.20	23/09	22.2	3.69	1.72
		1997	1765	96	1112	94	13.96	232.6	19/02	2.97	31/01	30.9	6.20	3.17
		1998	2075	113	1602	135	20.13	223.7	24/10	3.91	27/05	38.2	14.80	5.50
		1999	2024	110	1486	125	18.67	185.1	03/12	4.19	05/09	42.9	10.49	4.74
		2000	2256	122										

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
076002	**Eden at Warwick Bridge** C.A: 1366.7 km^2	**59..95**	*1293*		**792**		**34.31**	**1343.0**	**01/04 1968**	**2.94**	**25/07 1989**	**73.8**	**21.60**	**6.74**
M.A: EA	Local No: 762507 Sens.: 8.0 B/full: 410.0m^3s^{-1}													
F.A.R: SP	Level: 18m UE: <.01 FAI: 0.957													
Comment: VA cableway station subject to bypassing over 3.8m on LB and severe weed growth months 5-12 replaced in 1996 by non-standard triangular profile compound weir sited on a natural rock step. Very responsive. Influenced by major abstractions from Haweswater and Wet Sleddale. # Horseshoe shaped outcrop of Carboniferous Limestone forms south and east watersheds in Pennines; Lakes drain Silurian volcanics. Main Vale of Eden is Boulder Clay covered Permo-Triassic sandstone. Land use variable, moorland to arable.		1996	974	75	543	69	23.45	258.9	06/11	6.85	24/09	49.2	15.49	8.14
		1997	1218	94	746	94	32.31	555.0	19/02	9.94	22/07	61.1	17.19	11.00
		1998	1490	115										
		1999	1440	111										
		2000	1647	127										
076011	**Coal Burn at Coalburn** C.A: 1.5 km^2	**67..95**	**1288**		**967**		**0.05**	**5.9**	**29/08 1975**	**0.00**	**01/09 1995**	**0.1**	**0.02**	**>0.00**
M.A: EA	Local No: 763117 Sens.: B/full: 14.5m^3s^{-1}													
F.A.R: N	Level: 275m UE: <.01 FAI: 1.000													
Comment: Compound broad crested weir; full-range. Replaced Crump profile weir in Aug 1991. Rated theoretically. Zero flows common in summer months. Jointly managed by EA, CEH and the Forestry Commission. Small experimental catchment to show the affects of afforestation from planting to canopy closure. Natural catchment. Areal rainfall derived by CEH using a small network of within-catchment raingauges. # Tributary of R. Irthing. Steep catchment around 300m on Carboniferous L'st with Boulder Clay and blanket peat cover. Usage was entirely moorland before being afforested,		1996	968	75	611	63	0.03	1.3	30/04	0.00	18/06	0.1	0.01	
		1997	1172	91	743	77	0.04	2.2	17/02	0.00	01/06	0.1	>0.00	>0.00
		1998	1439	112	1107	114	0.05	1.3	08/01	>0.00	19/05	0.1	>0.00	>0.00
		1999	1290	100	961	99	0.05	2.2	05/01	0.00	02/08	0.1	>0.00	>0.00
		2000	1502	117	1053	109	0.05	1.8	11/01	0.00	01/07	0.1	>0.00	>0.00
076008	**Irthing at Greenholme** C.A: 334.6 km^2	**67..95**	**1067**		**706**		**7.49**	**247.8**	**03/01 1982**	**0.08**	**31/05 1975**	**17.8**	**3.65**	**1.02**
M.A: EA	Local No: 763308 Sens.: 15.0 B/full: 180.0m^3s^{-1}													
F.A.R: SP	Level: 18m UE: <.01 FAI: 0.996													
Comment: Velocity-area station. Permanent cableway. Before 1/9/75 gabion control effective over most of flow range. D/s gravel abstractions caused scour, rating changes frequent. Now informal Flat V, insensitive at low flows. Moderately affected by Castle Carrock Res. # Tributaries rising in the Pennines are short, steep and flashy through heather and moorland cover. Solid geology dominated by Carboniferous L'st - outcrops on steep slopes. Extensive hill peat, Boulder Clay and glacial sands and gravels. Land use: moorland to arable.		1996	800	75	437	62	4.62	85.6	19/12	0.74	24/09	10.9	2.33	0.83
		1997	990	93	571	81	6.06	146.7	17/02	1.04	30/08	13.4	2.73	1.09
		1998	1298	122	881	125	9.35	124.4	07/03	1.11	26/05	20.4	5.65	1.68
		1999	1179	110	780	110	8.27	**264.9**	**05/01**	1.05	11/08	17.1	4.52	1.47
		2000	1302	122	903	128	9.56	257.6	11/01	1.17	22/07	20.1	5.13	1.42
076010	**Petteril at Harraby Green** C.A: 160.0 km^2	**70..95**	**929**		**419**		**2.13**	**59.1**	**27/03 1987**	**0.17**	**22/08 1995**	**5.3**	**1.10**	**0.27**
M.A: EA	Local No: 764009 Sens.: 25.1 B/full: 38.1m^3s^{-1}													
F.A.R: N	Level: 20m UE: <.01 FAI: 0.994													
Comment: Velocity-area station with sharp-edged rectangular weir; d/s concrete apron. Weir nearly full width of channel. Rarely overtopped. Permanent cableway. Weed growth affects rating (severely in 1973 and 1974). Natural catchment. # Long, thin catchment rising in moorland W of Penrith, flowing N to Carlisle. Carboniferous L'st in headwaters; remainder: Upper Carboniferous and Permo-Triassic s'sts covered with Boulder Clay and valley gravel.		1996	675	73	243	58	1.23	23.6	10/02	0.18	19/09	2.8	0.54	0.19
		1997	846	91	315	75	1.60	35.4	17/02	0.22	26/08	3.7	0.58	0.25
		1998	1050	113	483	115	2.45	34.3	24/10	0.34	16/07	5.9	1.36	0.41
		1999	1061	114	518	124	2.63	36.9	03/03	0.23	05/09	6.2	1.22	0.26
		2000	1205	130	641	153	3.24	33.4	12/01	0.30	12/08	8.2	1.87	0.35
076009	**Caldew at Holm Hill** C.A: 147.2 km^2	**68..95**	**1436**		**999**		**4.66**	**181.4**	**25/11 1979**	**0.45**	**21/09 1995**	**10.5**	**2.79**	**0.81**
M.A: EA	Local No: 765011 Sens.: 10.2 B/full: 190.0m^3s^{-1}													
F.A.R: N	Level: 60m UE: <.01 FAI: 0.999													
Comment: Natural channel with low flow gabion control, severely affected by gravel deposition. Rating changes due to gabion suffering damage at high velocities. Full range of flows contained. Permanent cableway. Natural catchment. Station closed 10/04/2000. # Rises on impervious Skiddaw Slates and flows northward over Carboniferous L'st and Coal Measures. Hill peat; Boulder Clay extensive below 200m. Rural catchment, heath and moorland in headwaters, arable farming confined to lower reaches.		1996	974	68	555	56	2.58	61.5	05/11	**0.30**	**19/08**	5.9	1.39	0.34
		1997	1311	91	671	67	3.13	85.7	19/02	0.34	26/08	8.3	1.18	0.43
		1998	1546	108										
		1999	1592	111	905	91	4.22	87.6	06/12	0.33	05/09	10.3	2.19	0.47
		2000	1803	126										
076007	**Eden at Sheepmount** C.A: 2286.5 km^2	**67..95**	**1211**		**714**		**51.75**	**1357.0**	**24/03 1968**	**5.47**	**07/09 1976**	**114.3**	**31.46**	**9.71**
M.A: EA	Local No: 765512 Sens.: 3.5 B/full: 230.0m^3s^{-1}													
F.A.R: SP	Level: 7m UE: <.01 FAI: 0.973													
Comment: Velocity-area station. Permanent cableway. Full-range. Most floods contained in immediate channel. Pre-1970 (when floodbanks constructed) bypassed via Caldew floodplain. Inlet may block at high flows; gravel movement around d/s bridge and weed growth may affect low flows. Highly influenced by Ullswater, Haweswater and Wet Sleddale especially at low flows. Periodic recalibration. # Rural except for Carlisle, Penrith and Appleby. Headwaters in Carboniferous Limestone of Pennines to east, impervious Lower Palaeozoics of Lake District massif to west; moorland. Extensive Boulder Clay covered Permo-Triassic sandstone in Vale of Eden. Arable and grazing.		1996	889	73	436	61	31.54	357.9	06/11	5.49	24/09	71.2	19.00	7.19
		1997	1115	92	584	82	42.35	685.7	20/02	8.82	22/07	83.5	20.51	9.85
		1998	1377	114	801	112	58.10	666.0	25/10	12.42	26/05	117.3	40.12	15.74
		1999	1325	109	823	115	59.65	785.0	06/01	10.42	12/08	135.1	36.87	12.54
		2000	1508	125	1003	140	72.53	701.1	12/01	11.48	24/07	179.7	45.76	14.51
077001	**Esk at Netherby** C.A: 841.7 km^2	**63..95**	**1453**		**970**		**25.89**	**1112.0f**	**31/10 1977**	**1.85**	**25/07 1984**	**61.6**	**13.80**	**3.26**
M.A: EA	Local No: 770201 Sens.: 7.3 B/full: 620.0m^3s^{-1}													
F.A.R: N	Level: 14m UE: <.01 FAI: 0.997													
Comment: Velocity-area station. Permanent cableway. Full-range. Regrading of natural control after high flows and gravel abstractions d/s affect rating. High flow gauging difficult because flashy. Black Esk Res. 47km u/s. Natural catchment. # EA jurisdiction extends 9km u/s to Scottish border, otherwise SEPA area. Rural. Silurian rocks with igneous intrusions in north. Carboniferous L'st in centre and Permo-Triassic succession in S. Widely blanketed by Boulder Clay. Heavily forested in north, arable in S.		1996	1261	87	877	90	23.35	482.1	05/11	1.96	20/09	56.5	13.54	2.41
		1997	1364	94	1005	104	26.82	900.8	17/02	4.72	22/07	62.2	13.39	5.47
		1998	1693	117	1303	134	34.77	570.9	20/10	4.36	26/05	80.6	23.37	6.21
		1999	1552	107	1074	111	28.67	541.6	24/01	3.03	24/08	66.4	15.36	3.72
		2000	1706	117	1235	127	32.87	629.2	24/10	2.64	28/07	72.2	19.58	4.24
077005	**Lyne at Cliff Bridge** C.A: 191.0 km^2	**76..95**	**1166**		**852**		**5.16**	**292.8**	**30/10 1977**	**0.27**	**25/07 1984**	**13.4**	**2.31**	**0.48**
M.A: EA	Local No: 770302 Sens.: 13.3 B/full: 620.0m^3s^{-1}													
F.A.R: N	Level: 12m UE: <.01 FAI: 0.999													
Comment: Flat V weir with a cableway 30m u/s. Subject to severe accretion from gravel shoals which disturb rating and cause weir to drown early. Regular maintenance necessary. # Moderate relief catchment draining the Bewcastle fells. Carboniferous L'st solid geology is covered by peat on the moorland and Boulder Clay on the lower slopes. Entirely rural.		1996	897	77	534	63	3.23	123.3	05/11	0.30	21/09	7.6	1.51	0.40
		1997	1033	89	834	98	5.05	142.2	17/02	0.70	22/07	12.8	2.22	0.84
		1998	1358	116	1200	141	7.27	140.2	16/08	0.58	26/05	18.9	3.84	0.86
		1999	1184	102										
		2000	1324	114										

Map 12: NORTHERN IRELAND



Area: 14,133 km^2

Average Rainfall (1961–90): 1059 mm

Gauging Station Register

Station number	River name	Station name	Grid reference	Catchment area (sq km)	Station type	Period of record	Mean ann. rainfall (mm)	Mean ann. runoff (mm)	Mean ann. loss (mm)	Max. ann. runoff (mm)	Year of max.	Min. ann. runoff (mm)	Year of min.	Mean flow (m^3s^{-1})	Min. mon. flow (m^3s^{-1})	Month/Year of min.	Median ann. flood (m^3s^{-1})	Base Flow Index	10 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
201006	Drumragh	Campsie Bridge	IH 459722	320.0	VA	1972–00	1174	830	344	**1080**	**99**	490	75	8.43	0.39	07/89	106.7	.35	21.8	0.63
201005	Camowen	Camowen Terrace	IH 460730	276.6	VA	1972–00	1156	768	388	**1033**	**99**	412	75	6.74	0.61	07/89	87.8	.43	15.1	1.02
201002	Fairywater	Dudgeon Bridge	IH 405757	158.4	VA	1971–00	1342	1047	295	**1402**	**99**	628	75	5.26	0.19	08/76	67.3	.26	13.4	0.38
201009	Owenkillew	Crosh	IH 419866	440.1	VA	1980–00	1413	1134	279	**1325**	**99**	889	89	15.82	1.97	08/83	291.9	.39	36.1	2.72
201008	Derg	Castlederg	IH 265842	335.4	VA	1975–00	1727	1343	384	**1744**	**99**	1006	87	14.28	0.42	08/83	200.7	.34	35.4	0.74
201010	Mourne	Drumnabuoy Ho	IH 348961	1843.8	VA	1982–00	1356	998	358	**1207**	**99**	789	87	58.36	2.93	08/95	604.0	.42	144.1	6.33
201007	Burn Dennet	Burndennet Br	IC 372047	148.3	VA	1975..00	1208	867	341	1200	81	560	76	4.08	0.58	08/76	78.5	.56	8.8	0.87
202002	Faughan	Drumahoe	IC 464151	273.1	VA	1976–00	1255	956	299	1213	81	721	83	8.28	0.93	08/95	140.7	.50	18.5	1.40
202001	Roe	Ardnargle	IC 674246	364.4	VA	1975–99	1269	867	402	1196	81	**596**	**97**	10.02	0.76	08/95	147.7	.36	24.5	1.22
203043	Oonawater	Shanmoy	IH 780557	94.1	FVVA	1986–00	*1066*	576	490	724	88	451	97	1.72	0.01	08/95	74.5		4.4	0.09
203010	Blackwater	Maydown Bridge	IH 821519	970.2	VA	1970–00	999	569	430	797	88	314	75	17.50	0.65	08/75	97.3	.44	45.0	1.21
203025	Callan	Callan New Br	IH 892525	166.9	VA	1971–00	925	523	402	778	93	289	75	2.77	0.16	07/77	36.7	.44	6.6	0.28
203038	Rocky	Rocky Mountain	IJ 243265	7.7	FV	1986–00	1582	1237	345	**1581**	**98**	987	91	0.30	0.02	08/95		.33	0.7	0.04
203033	Upper Bann	Bannfield	IJ 234341	101.7	VA	1975..00	1286	828	458	**1028**	**96**	583	92	2.67	0.17	07/75	63.1	.34	6.4	0.27
203017 *	Upper Bann	Dynes Bridge	IJ 043511	316.3	VA	1970–91	1016	532	484	683	79	341	89	5.34	0.34	07/77	77.0	.36	11.9	0.50
203024	Cusher	Gamble's Bridge	IJ 047471	170.7	VA	1971..00	966	568	398	**793**	**00**	313	83	3.07	0.09	08/95	55.9	.40	7.7	0.15
203026 *	Glenavy	Glenavy	IJ 149725	44.6	TPVA	1971..98	992	548	444	839	72	250	75	0.77	0.05	07/84	18.5	.44	1.6	0.08
203042	Crumlin	Cidercourt Br	IJ 134765	55.3	VA	1981–00	1006	639	367	803	93	403	83	1.12	0.06	07/84	39.6	.36	2.6	0.10
203012	Ballinderry	Ballinderry Br	IH 926798	430.2	VA	1970–00	1087	687	400	**1023**	**99**	390	75	9.37	0.93	08/75	123.7	.51	19.9	1.58
203029 *	Six Mile Wtr	Ballyclare	IJ 282902	58.4	VA	1973–90	1179	869	310	1158	76	538	75	1.61	0.10	07/78		.50	3.4	0.16
203018	Six Mile Wtr	Antrim	IJ 145867	277.6	VA	1970–00	1094	690	404	**898**	**99**	415	75	6.07	0.47	08/83	75.0	.53	12.7	0.85
203046	Rathmore	Rathmore Bridge	IJ 197855	22.5	VA	1983–00	*1103*	586	517	893	85	**446**	**97**	0.42	**0.03**	**09/96**	11.1		0.9	0.05
203039	Clogh	Tullynewey	ID 088111	98.7	VA	1983..00	*1397*	876	521	**1044**	**98**	**642**	**97**	2.74	0.16	07/84	35.9		6.1	0.28
203092	Main	Dunminning Lw	ID 051110	221.5	VA	1983..00	1240	812	428	**1019**	**00**	**578**	**97**	5.70	0.61	07/84	62.0	.51	12.2	0.86
203011	Maine	Dromona	ID 049090	243.5	VA	1970..99	1195	735	460	945	79	**476**	**97**	5.67	**0.49**	**08/99**	54.2	.45	13.6	0.65
203027	Braid	Ballee	ID 098015	177.2	VA	1972–00	1191	851	340	**1226**	**98**	404	75	4.78	0.42	08/75	72.2	.48	9.7	0.75
203021	Kellswater	Curry's Bridge	IJ 107971	126.3	VA	1971–00	1193	786	407	1026	88	526	75	3.15	0.14	08/83	83.7	.32	7.5	0.26
203093	Maine	Shane's Viaduct	IJ 087897	707.4	VA	1983..00	1174	884	290	**1133**	**99**	705	89	19.84	1.12	07/84	209.9	.48	43.6	2.30
203020	Moyola	Moyola New Br	IH 956905	304.3	VA	1971–00	1228	874	354	**1126**	**99**	652	73	8.43	0.87	08/95	109.9	.43	19.4	1.39
203019	Claudy	Glenone Bridge	IC 961037	126.3	VA	1972..00	1117	817	300	1217	82	472	75	3.27	0.16	08/95	40.4	.43	7.9	0.36
203040	Lower Bann	Movanagher	IC 931154	5209.8	VA	1980–00	1024	577	447	690	88	**423**	**97**	95.28	11.82	09/95		.68	217.6	14.20
203028	Agivey	Whitehill	IC 882193	100.5	VA	1972–00	1246	891	355	1190	90	**686**	**97**	2.84	0.16	08/95	81.1	.35	6.6	0.36
204001	Bush	Seneirl Bridge	IC 942362	299.2	VA	1972..00	1132	702	430	980	81	415	75	6.66	0.44	08/83	61.0	.43	14.8	0.98
205008	Lagan	Drumiller	IJ 236525	84.6	VA	1974..00	1041	571	470	954	81	310	75	1.53	0.01	08/95	28.0	.34	3.5	0.07
205010 *	Lagan	Banoge	IJ 123540	189.8	VA	1974..94	941	433	508	670	78	217	83	2.61	0.03	07/84	120.7	.22	5.8	0.04
205005	Ravernet	Ravernet	IJ 268613	73.5	FV	1978–00	955	521	434	705	80	338	89	1.22	0.01	07/84	14.5	.44	3.1	0.04
205004	Lagan	Newforge	IJ 328693	491.6	VA	1972–00	927	546	381	785	79	309	75	8.50	0.62	08/76	77.8	.45	21.1	1.00
205015	Cotton	Grandmere	IJ 524818	19.2	VA	1990–00	*968*	388	580	**462**	**00**	324	91	0.24	0.01	08/95			0.6	0.02
205020	Enler	Comber	IJ 459697	61.8	FV	1983–00	945	386	559	**534**	**00**	254	89	0.76	0.06	07/84	22.9	.46	1.7	0.09
205011	Annacloy	Kilmore Bridge	IJ 448507	186.6	VA	1979–00	1000	584	416	**757**	**00**	368	89	3.45	0.06	07/84	35.7		8.8	0.14
206001	Clanrye	Mount Mill Br	IJ 086310	120.3	VA	1974..00	1000	545	455	712	85	358	89	2.08	0.12	08/83	23.2	.50	4.7	0.22
206002	Jerretspass	Jerretspass	IJ 065331	107.8	VA	1972..00	894	240	654	**334**	**97**	73	73	0.82	0.01	10/72	9.6	.40	2.0	0.03
236005	Colebrooke	Ballindarragh Br	IH 332358	313.6	VA	1975..00	1171	790	381	**1080**	**98**	573	76	7.85	0.44	08/95	102.5	.38	19.7	0.71
236007 *	Sillees	Drumrainy Br	IH 205400	166.3	VA	1981–00	1441	1047	394	**1366**	**99**	773	89	5.52	0.14	07/89	23.8	.53	13.4	0.37

Hydrometric Statistics

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
201006 **Drumragh at Campsie Bridge** C.A: 320.0 km^2	**72..95**	**1150**		**818**		**8.31**	**246.1**	**21/10 1987**	**0.16**	**15/07 1977**	**21.2**	**4.20**	**0.60**
M.A: RA Local No: Sens.: 11.0													
F.A.R: N Level: 63m UE: <.01 FAI: 0.998													
Comment: Velocity-area station with cableway. Flows for entire period of record reprocessed in 2002. No water abstractions or significant returns. # Catchment geology is approx 70% lower ORS with some conglomerates overlain with alluvium till and some peat. Predominantly (>50%) improved grassland, some bog and upland heath. No significant urban development.	1996	1120	97	729	89	7.38	138.6	06/08	0.58	20/07	20.7	3.05	0.75
	1997	1130	98	702	86	7.12	91.9	19/02	0.78	24/08	20.8	2.83	0.95
	1998	1409	123	1004	123	10.19	116.8	22/11	0.92	05/06	26.5	5.36	1.13
	1999	1402	122	1080	132	10.96	154.2	03/12	0.87	02/08	30.8	4.84	1.09
	2000	1320	115	930	114	9.41	112.5	29/10	0.54	23/07	23.0	4.30	0.72
201005 **Camowen at Camowen Terrace** C.A: 276.6 km^2	**72..95**	**1147**		**752**		**6.59**	**193.1**	**21/10 1987**	**0.28**	**07/08 1975**	**14.9**	**3.96**	**0.97**
M.A: RA Local No: Sens.: 26.0													
F.A.R: Level: 66m UE: .02 FAI: 0.991													
Comment: Velocity-area station with cableway, informal broad-crested weir (for mill use) acts as control. Flows from 1975 onwards reprocessed in 2002. The net effect of abstractions for PWS and augmentations from effluent returns is minor. # Catchment geology: mixed impermeable rocks (granite, schist and gneiss, and sandstone) overlain by substantial deposits of till, sand and gravel. Largely upland - improved grassland is predominant, some bog and uptand heath. No significant urban development.	1996	1100	96	742	99	6.49	83.4	06/08	1.05	20/07	14.1	4.09	1.31
	1997	1093	95	661	88	5.79	67.9	19/02	1.30	24/08	14.0	3.35	1.53
	1998	1302	114	964	128	8.46	88.8	22/11	1.84	04/06	18.2	5.90	2.29
	1999	1368	119	1033	137	9.06	126.3	03/12	1.60	28/07	21.1	5.31	1.86
	2000	1237	108	842	112	7.36	80.7	08/12	1.04	29/08	16.0	4.27	1.21
201002 **Fairywater at Dudgeon Bridge** C.A: 158.4 km^2	**71..95**	**1323**		**1027**		**5.16**	**120.6**	**19/01 1988**	**0.09**	**09/07 1984**	**13.1**	**2.45**	**0.37**
M.A: RA Local No: Sens.: 17.0													
F.A.R: N Level: 61m UE: <.01 FAI: 0.999													
Comment: Velocity-area station with cableway. Flows from 1977 reprocessed in 2002. Natural regime - no water abstractions or significant returns. # Catchment geology is 50% Carboniferous L'st some exposed, with extensive areas of till and alluvium drift deposits on both banks of the river. Predominantly grassland with some shrub heath, bog and coniferous woodland. No significant urban development.	1996	1283	97	906	88	4.54	76.6	06/08	0.23	20/07	12.7	2.01	0.39
	1997	1223	92	891	87	4.47	52.8	17/11	0.51	24/08	11.9	1.96	0.67
	1998	1599	121	1367	133	6.87	66.7	23/10	0.77	08/07	18.4	3.46	0.87
	1999	1566	118	1402	137	7.04	88.1	28/11	0.31	02/08	17.9	2.85	0.62
	2000	1490	113	1174	114	5.88	71.6	29/10	0.24	26/07	14.5	2.88	0.37

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
201009	**Owenkillew at Crosh** C.A: 440.1 km^2	**80..95**	**1404**		**1120**		**15.63**	**508.5**	**21/10 1987**	**1.54**	**14/08 1983**	**34.9**	**8.99**	**2.60**
M.A: RA	Local No: Sens.: 6.0													
F.A.R: N	Level: 40m UE: <.01 FAI: 0.998													
Comment: Velocity-area station with cableway. Flows for full period of record reprocessed in 2002. No water abstractions or significant returns. # Complicated faulted mixture of Upper Dalradian Green Beds and schists, basalts and igneous complexes, with small area of l'st; overlain by sands, gravels, peat and till, alluvium near watercourses. Predominantly grassland with significan bog, some shrub heath and coniferous woodland; no significant urban development.		1996	1337	95	1082	97	15.06	284.2	05/08	2.25	20/07	33.9	8.87	2.94
		1997	1281	91	915	82	12.76	211.8	19/02	2.56	24/08	31.7	6.62	3.06
		1998	1506	107	1271	113	17.74	245.0	24/10	3.11	04/06	37.7	11.64	3.47
		1999	1594	114	1325	118	18.50	355.1	28/11	2.79	02/08	44.9	10.14	3.43
		2000	1503	107	1304	116	18.15	215.5	04/12	2.35	24/07	40.4	11.54	3.08
201008	**Derg at Castlederg** C.A: 335.4 km^2	**75..95**	*1711*		**1317**		**14.01**	**244.8**	**21/09 1985**	**0.11**	**22/07 1989**	**34.8**	**7.40**	**0.65**
M.A: RA	Local No: Sens.: 13.0													
F.A.R: E	Level: 43m UE: <.01 FAI: 0.917													
Comment: Velocity-area station with cableway. Headwaters contain Lough Derg and Lough Mourne but there are no significant water abstractions or effluent returns u/s of the station. Highest gauged mean catchment runoff in NI. Flows from 1975 onwards reprocessed in 2002. # Heavily faulted strata in Upper and Middle Dalradian Quartzite series. Erratic overburden of till, peat and alluvium, considerable rock dominance. Predominantly grassland, sig. coniferous woodland, some bog and marsh (>2%, high for NI). Contains Castlederg (pop. 2,600).		1996	1479	86	1073	81	11.38	174.0	05/11	0.61	23/06	29.4	5.76	0.90
		1997	1528	89	1095	83	11.64	154.1	16/09	0.83	10/07	32.2	5.46	1.19
		1998	1961	115	1670	127	17.76	198.1	22/10	0.96	28/05	41.2	11.02	1.59
		1999	2017	118	1744	132	18.55	228.9	28/11	1.35	12/06	47.3	9.93	2.04
		2000	1930	113	1662	126	17.63	181.5	02/03	0.74	18/07	39.9	11.32	1.10
201010	**Mourne at Drumnabuoy House** C.A: 1843.8 km^2	**82..95**	**1338**		**987**		**57.72**	**1058.6**	**21/10 1987**	**1.32**	**24/07 1989**	**140.3**	**32.30**	**5.69**
M.A: RA	Local No: Sens.: 6.0													
F.A.R: S	Level: 7m UE: .01 FAI: 0.979													
Comment: Velocity-area station with cableway and natural control. Flows for full period of record reprocessed in 2002. # Geology: mixed impermeable (granite, schist and gneiss, and s'st) with some Carboniferous L'st W of Omagh. A mainly rural catchment (predominantly grassland with some shrub, bog and coniferous woodland) but with urban development at Omagh (pop. 17,3000 - no major industry) and Castlederg (2,600).		1996	1252	94	888	90	51.79	575.9	06/08	4.37	20/07	123.7	30.85	6.32
		1997	1231	92	791	80	46.24	479.1	19/02	5.41	25/08	124.9	23.44	7.24
		1998	1519	114	1166	118	68.20	547.9	20/10	7.48	05/06	164.7	43.53	9.55
		1999	1570	117	1207	122	70.58	884.9	28/11	7.05	24/08	182.1	39.23	8.51
		2000	1474	110	1117	113	65.14	507.5	08/12	4.02	26/07	158.8	39.48	6.24
201007	**Burn Dennet at Burndennet** C.A: 148.3 km^2	**75..95**	**1193**		**868**		**4.08**	**149.8**	**21/10 1987**	**0.41**	**28/08 1976**	**8.9**	**2.73**	**0.85**
M.A: RA	Local No: Sens.: 10.0													
F.A.R: E	Level: 0m UE: <.01 FAI: 1.000													
Comment: Velocity-area station with cableway and natural control; discharge through the underlying gravels may be significant. No water abstractions or significant returns. # Geology: schist, limestone and quartzite curtailed at Burndennet Bridge by a major fault drop. Extensive sand and gravel deposits either side of the river, remainder till and limited peat. Predominantly improved grassland, some bog and shrub heath rising to above 500 mOD; no significant urban development.		1996	1176	99	795	92	3.73	123.7	05/08	0.87	20/07	7.9	2.26	1.08
		1997	1131	95	656	76	3.09	58.8	19/02	0.75	25/08	6.8	1.77	0.88
		1998	1328	111	981	113	4.61	108.4	22/10	0.92	08/07	9.0	2.91	1.16
		1999	1478	124	1040	120	4.89	130.3	28/11	0.66	24/08	11.8	2.66	0.76
		2000	1325	111	869	100	4.08	76.3	08/12	0.75	24/07	9.2	2.49	0.91
202002	**Faughan at Drumahoe** C.A: 273.1 km^2	**76..95**	**1243**		**955**		**8.27**	**253.4**	**21/10 1987**	**0.72**	**13/07 1992**	**18.3**	**5.35**	**1.32**
M.A: RA	Local No: Sens.: 11.0													
F.A.R: PGEI	Level: 7m UE: .01 FAI: 1.000													
Comment: Velocity-area station with cableway and natural control altered in 1985. Flows for full period of record reprocessed in 2002. # Geology: layered Upper Dalradian with some quartzite. Drift - till, peat and alluvium, some glacial outwash near river. Predominantly grassland with some shrub heath and bog. Suburban development near coast - some light industry; otherwise agricultural, upland basin. Important game angling river.		1996	1173	94	832	87	7.18	175.6	05/08	1.15	20/07	15.8	4.51	1.71
		1997	1179	95	737	77	6.38	105.0	19/02	1.38	19/08	15.5	3.77	1.70
		1998	1358	109	1067	112	9.24	160.0	22/10	1.78	07/07	18.7	6.32	2.09
		1999	1449	117	1085	114	9.39	245.1	28/11	0.94	24/08	22.9	4.91	1.20
		2000	1328	107	1084	114	9.36	151.5	08/12	1.47	16/07	20.4	6.14	1.56
202001	**Roe at Ardnargle** C.A: 364.4 km^2	**75..95**	*1267*		**867**		**10.02**	**185.9**	**02/10 1981**	**0.61**	**21/08 1995**	**24.5**	**5.14**	**1.20**
M.A: RA	Local No: Sens.: 8.0													
F.A.R: SN	Level: 1m UE: .01 FAI: 0.993													
Comment: Velocity-area station with cableway. Rough profiled stone and concrete weir immediately d/s, at u/s limit of backwaters created by tides. Flows for POR reprocessed in 2002. 1982 and 2000 flows removed from NRFA pending further validation. Headwaters contain Altnaheglish reservoir, yielding some 32 Ml/d. # High upland headwater area sloping fairly steeply onto an intensively cultivated alluvial plain. Geology very varied with metamorphic, sedimentary and contemporaneous igneous rocks. Predominantly grassland headwaters with some shrub heath, bog and coniferous woodland. Intensively cultivated alluvial plain. Contains towns of Limarady (pop. 10,800) and Dungiven (pop. 2,800).		1996	1183	93	779	90	8.98	151.4	05/08	1.14	20/07	25.4	3.92	1.41
		1997	1127	89	596	69	6.88	119.4	17/11	0.79	24/08	18.5	2.90	1.03
		1998	1398	110	905	104	10.46	170.1	02/11	1.27	27/05	23.0	5.52	1.55
		1999	1423	112	1180	136	13.64	176.8	28/11	0.71	13/07	30.9	9.06	1.84
		2000	1333	105										
203043	**Oonawater at Shanmoy** C.A: 94.1 km^2	**86..95**			**568**		**1.70**	**42.9**	**21/10 1987**	**0.01**	**31/08 1995**	**4.3**	**0.84**	**0.07**
M.A: RA	Local No: Sens.:													
F.A.R: RPI	Level: 36m UE: <.01 FAI: 0.984													
Comment: Velocity-area station with cableway; Flat V weir constructed in 1986. Flows for full period of record reprocessed in 2002. # Predominantly improved grassland with no significant centres of habitation. Highest total grass cover (92%) of gauged NI catchments (highest improved grass also - 76%).		1996			539	95	1.60	17.9	24/10	0.06	24/07	4.3	0.83	0.08
		1997	949		451	79	1.35	19.9	19/02	0.09	23/08	3.7	0.61	0.13
		1998	1131		678	119	2.02	40.2	24/10	0.12	04/06	4.5	1.14	0.25
		1999	1121		659	116	1.97	**43.5**	**24/12**	0.10	02/08	5.3	0.92	0.16
		2000	1061		631	111	1.88	29.1	08/12	0.07	23/07	4.5	1.01	0.13
203010	**Blackwater at Maydown Bridge** C.A: 970.2 km^2	**70..95**	**987**		**563**		**17.32**	**157.1**	**23/10 1987**	**0.18**	**04/09 1976**	**44.9**	**9.56**	**1.09**
M.A: RA	Local No: Sens.: 7.0													
F.A.R: GN	Level: 15m UE: .01 FAI: 0.983													
Comment: Velocity-area station with cableway and natural control. Flows for full POR reprocessed in 2002. Flows influenced by major arterial drainage scheme - started in 1983. Substantial portion of catchment is in the Irish Republic where some groundwater may be abstracted but its hydrological significance is uncertain. # Geology: Carboniferous Limestone and Millstone Grit with sandstones overlain by substantial amounts of till. A predominantly rural catchment - largely improved grassland with limited afforestation. Monaghan Town (pop. 5,000) - in the Irish Republic - is the only significant urban centre.		1996	1011	102	527	94	16.17	110.6	03/12	1.34	21/07	39.2	10.17	1.83
		1997	958	97	458	81	14.09	124.2	19/02	1.60	25/08	32.8	7.48	2.14
		1998	1193	121	685	122	21.06	143.2	24/10	2.92	05/06	48.2	12.58	3.71
		1999	1112	113	687	122	21.14	156.1	24/12	1.34	01/08	58.9	10.42	2.22
		2000	1043	106	642	114	19.71	139.4	08/12	1.13	26/07	47.6	11.61	1.77
203025	**Callan at Martin's Bridge** C.A: 166.9 km^2	**71..95**	**915**		**500**		**2.65**	**41.1**	**21/10 1987**	**0.07**	**18/09 1976**	**6.3**	**1.39**	**0.25**
M.A: RA	Local No: Sens.: 13.0													
F.A.R: RPI	Level: 16m UE: .03 FAI: 0.959													
Comment: Velocity-area station with cableway; natural control. U/s bridge surcharged in high flow. Flows from 1975 onwards reprocessed in 2002. Reservoir storage in catchment with abstractions for PWS and industrial use; minor net effect. # Geology: mixed shales (Carboniferous) and quartzite (Ordovician), overlain by till. Predominantly improved grassland. Urban areas: Armagh (pop. 14,700) with some light industry, and Keady (pop. 2,500).		1996	924	101	621	124	3.28	31.0	09/02	0.30	21/09	7.3	2.12	0.51
		1997	914	100	558	112	2.95	33.2	19/02	0.33	03/10	7.4	1.45	0.46
		1998	1004	110	654	131	3.46	39.5	06/01	0.60	26/09	7.7	1.98	0.69
		1999	994	109	660	132	3.49	40.5	24/12	0.35	04/09	9.7	1.41	0.49
		2000	1018	111	681	136	3.59	**42.2**	**08/12**	0.39	27/07	7.9	2.00	0.51
203038	**Rocky at Rocky Mountain** C.A: 7.7 km^2	**86-95**	**1510**		**1192**		**0.29**	**17.1**	**01/09 1988**	**0.02**	**13/08 1995**	**0.7**	**0.14**	**0.04**
M.A: RA	Local No: Sens.: 29.0													
F.A.R: N	Level: m UE: FAI:													
Comment: Flat V weir, approx. 6.1 metres wide in steep mountain stream - pebble/cobble bed, large boulders may settle in measuring reach during floods. Theoretical calibration - some confirmatory gaugings (by wading) completed. All but notable floods contained. Flows for full POR reprocessed in 2002; pre-1985 flows removed from archive. Natural and responsive regime. Catchment rainfall may be underestimated. # A rugged, impervious catchment - with some thin peat cover - in the Mourne Mountains. 51% shrub heath and 49% rough grass cover (both maxima for NI gauged catchments).		1996	1839	122	1587	133	0.39	9.3	03/01	0.04	20/07	1.0	0.16	0.05
		1997	1521	101	1233	103	0.30	11.1	26/11	0.04	18/04	0.7	0.13	0.05
		1998	1841	122	1395	117	0.34	**17.3**	**23/10**	0.05	27/05	0.9	0.17	0.06
		1999	1618	107	1174	98	0.29	15.5	20/09	0.02	30/07	0.7	0.13	0.04
		2000	1839	122	1247	105	0.30	9.9	03/12	0.03	24/07	0.8	0.15	0.04

	Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
203033 Upper Bann at Bannfield C.A: 101.7 km²	**75..95**	**1264**		**803**		**2.59**	**138.7**	**26/10 1992**	**0.12**	**10/07 1977**	**6.2**	**1.27**	**0.26**
M.A: RA Local No: Sens.: 18.0													
F.A.R: R Level: 77m UE: <.01 FAI: 0.951													
Comment: Velocity-area station with cableway and Flat V control (installed in 1989, natural control, previously). Flows for full POR reprocessed in 2002. Reservoir storage (Speiga and Lough Island Reavy) in catchment with abstractions for PWS the net effect of which is minor. The station is used to monitor a prescribed flow of 18 Ml/d. # The Upper Bann drains the Mourne Mountains. Geology: impermeable (granite and quartzite) overlain with substantial amounts of superficial deposits (till). The catchment is predominantly grassland with some shrub heath; no significant urban fraction.	1996	1455	115	1031	128	3.32	70.7	04/01	0.26	29/06	8.0	1.36	0.37
	1997	1249	99	806	100	2.60	67.2	26/11	0.20	20/04	6.3	0.85	0.28
	1998	1369	108	935	116	3.02	75.7	06/01	0.28	27/05	7.0	1.15	0.34
	1999	1325	105	874	109	2.82	65.7	20/12	0.22	05/07	6.6	1.15	0.28
	2000	1487	118	1018	127	3.28	65.0	07/12	0.35	24/07	7.6	1.40	0.41
203024 Cusher at Gamble's Bridge C.A: 170.7 km²	**71..95**	**960**		**539**		**2.92**	**73.3**	**21/10 1987**	**0.00**	**20/07 1980**	**7.1**	**1.50**	**0.14**
M.A: RA Local No: Sens.: 27.0													
F.A.R: N Level: 14m UE: <.01 FAI: 0.994													
Comment: Velocity-area station with cableway. Informal concrete-block weir, installed in 1980, immediately d/s has stabilised the measuring section. Effect of augmentations is minor. Flows for full period of record reprocessed in 2002. # Geology: predominantly quartzite with basalt overlain by till. Rural catchment, mostly improved grassland with some horticulture. Small urban area: Tandragee (pop. 2,900).	1996	911	95	617	114	3.33	34.7	04/01	0.17	20/07	8.5	1.80	0.19
	1997	943	98	642	119	3.47	41.9	19/02	0.32	04/10	9.0	1.58	0.45
	1998	1011	105	790	147	4.27	46.1	06/01	0.37	10/07	10.2	2.23	0.52
	1999	1021	106	710	132	3.84	50.3	24/12	0.10	01/08	10.9	1.66	0.15
	2000	1056	110	795	147	4.29	57.0	08/12	0.51	23/07	9.4	2.43	0.59
203042 Crumlin at Cidercourt Bridge C.A: 55.3 km²	**81..95**	**994**		**624**		**1.09**	**79.4**	**21/10 1987**	**0.03**	**26/07 1984**	**2.5**	**0.57**	**0.10**
M.A: RA Local No: Sens.: 21.0													
F.A.R: N Level: m UE: .02 FAI: 1.000													
Comment: Velocity-area station with cableway and natural control. Flows from 1983 onwards reprocessed in 2002. # Catchment geology is impermeable (mainly basalt) overlain by till. Mostly upland - predominantly improved grassland. No major urban areas, but contains Crumlin (pop. 2,700), some scattered light industry.	1996	982	99	651	104	1.14	30.7	04/01	0.08	19/08	3.0	0.55	0.09
	1997	959	96	596	96	1.05	51.8	26/11	0.13	21/07	2.3	0.42	0.18
	1998	1086	109	764	122	1.34	31.4	24/10	0.19	10/07	3.1	0.71	0.23
	1999	1059	107	699	112	1.23	46.7	20/09	0.09	01/08	3.5	0.55	0.12
	2000	1119	113	704	113	1.23	29.1	09/10	0.05	15/08	3.3	0.51	0.06
203012 Ballinderry at Ballinderry Bridge C.A: 430.2 km²	**70..95**	**1077**		**652**		**8.90**	**209.2**	**21/10 1987**	**0.61**	**14/08 1975**	**19.0**	**5.60**	**1.50**
M.A: RA Local No: Sens.: 13.0													
F.A.R: N Level: 16m UE: .02 FAI: 1.000													
Comment: Velocity-area station with cableway and natural control. Flows for full period of record reprocessed in 2002. # Very mixed geology: granite, schist, shale and some Carboniferous Limestone overlain with substantial amounts of till and gravel. Mainly rural catchment (predominantly improved grassland) with significant upland area. Cookstown (pop. 10,500) has cement manufacturing works nearby.	1996	1034	96	745	114	10.13	84.8	03/12	2.62	20/07	22.1	6.97	2.90
	1997	1049	97	714	110	9.74	88.7	24/12	2.97	21/07	22.1	6.13	3.49
	1998	1220	113	946	145	12.91	132.9	24/10	3.75	09/07	25.7	8.42	4.40
	1999	1255	117	1023	157	13.96	172.5	24/12	4.22	02/08	28.6	8.95	4.51
	2000	1124	104	894	137	12.17	130.9	08/12	3.67	25/07	22.9	8.61	4.07
203018 Six-Mile Water at Antrim C.A: 277.6 km²	**70..95**	**1087**		**671**		**5.91**	**163.8**	**21/10 1987**	**0.24**	**20/08 1977**	**12.3**	**4.00**	**0.82**
M.A: RA Local No: Sens.: 13.0													
F.A.R: REI Level: 13m UE: .03 FAI: 0.993													
Comment: Velocity-area station with cableway and natural control. Flows from 1975 onwards reprocessed in 2002. The net effect of industrial abstractions and effluent returns is minor. # The geology is almost entirely basalt with considerable superficial deposits (till). Significant proportion of upland - predominantly improved grassland. Urban and suburban development: Antrim (pop. 20,900) has substantial light industry and Ballyclare (pop. 7,800) is a small market town.	1996	1050	97	699	104	6.14	80.2	04/01	0.44	21/09	13.0	4.10	0.69
	1997	1002	92	624	93	5.50	106.8	26/11	1.35	21/07	11.6	3.03	1.69
	1998	1207	111	878	131	7.73	81.4	24/10	1.83	05/06	15.4	5.00	2.19
	1999	1200	110	899	134	7.91	104.8	24/12	0.79	24/08	18.6	4.56	1.05
	2000	1216	112	830	124	7.29	88.2	09/10	0.70	27/07	15.8	4.23	0.86
203046 Rathmore Burn at Rathmore Bridge C.A: 22.5 km²	**83..95**			**607**		**0.43**	**9.8**	**21/10 1987**	**0.02**	**19/08 1995**	**0.9**	**0.29**	**0.06**
M.A: RA Local No: Sens.: 23.0													
F.A.R: N Level: 42m UE: <.01 FAI: 1.000													
Comment: Velocity-area station. Flows for full period of record reprocessed in 2002. # Predominantly improved grassland, but rock outcrops also; some horticulture (mainly potatoes). No significant urban centres.	1996			535	88	0.38	6.4	03/12	0.02	19/09	0.9	0.25	0.02
	1997	961		446	73	0.32	7.8	26/11	0.04	18/07	0.7	0.20	0.07
	1998	1134		559	92	0.40	7.9	24/10	0.04	07/10	0.8	0.26	0.06
	1999	1156		600	99	0.43	10.1	24/12	0.04	01/08	1.0	0.25	0.05
	2000	1152		551	91	0.39	7.8	09/10	0.02	27/07	1.0	0.20	0.03
203039 Clogh at Tullynewey C.A: 98.7 km²	**83..95**			**861**		**2.70**	**43.2**	**15/11 1995**	**0.10**	**03/07 1995**	**6.0**	**1.74**	**0.26**
M.A: RA Local No: Sens.: 28.0													
F.A.R: SP Level: 84m UE: <.01 FAI: 0.986													
Comment: Velocity-area station with cableway. Flows for full period of record reprocessed in 2002. Headwaters contain Dungonnell reservoir, yielding some 12 Ml/d. # Geology: a Lower Basalt stratum. Agricultural area, sparsely populated - predominantly grassland with some shrub heath.	1996			834	97	2.60	35.0	01/05	0.15	17/09	6.6	1.41	0.32
	1997	1116		642	75	2.01	33.4	26/11	0.15	25/08	4.8	1.16	0.24
	1998	1529		1044	121	3.27	40.1	02/04	0.51	08/10	6.6	2.32	0.63
	1999	1469		1004	117	3.14	38.8	20/09	0.15	26/07	7.2	1.89	0.35
	2000	1468		1033	120	3.23	25.4d	08/12	0.17	22/07	7.0	2.11	0.23
203092 Maine at Dunminning C.A: 221.5 km²	**83..95**	**1223**		**796**		**5.59**	**83.9**	**16/11 1995**	**0.37**	**27/07 1984**	**12.0**	**3.88**	**0.84**
M.A: RA Local No: Sens.: 6.0													
F.A.R: SR Level: m UE: <.01 FAI: 0.994													
Comment: Velocity-area station with cableway located immediately d/s of a radial gated flood control structure. Flows for full POR reprocessed in 2002. U/s reservoir effectively transfers 12 Ml/d to points d/s of the station. # Catchment developed mainly on Lower Basalt strata. Predominantly improved grassland but catchment contains Glarryford bog.	1996	1201	98	763	96	5.34	63.5	01/05	0.68	22/09	12.2	3.05	0.84
	1997	1051	86	579	73	4.06	46.9	19/02	0.73	26/08	9.4	2.24	0.83
	1998	1417	116	897	113	6.30	61.8	03/04	1.64	05/06	13.4	3.82	1.81
	1999	1399	114										
	2000	1371	112	1022	128	7.16	59.3	08/12	0.89	24/07	16.7	4.36	1.18
203011 Maine at Dromona C.A: 243.5 km²	**70..80**	**1172**		**752**		**5.81**	**67.1**	**16/08 1970**	**0.39**	**06/07 1975**	**13.9**	**3.36**	**0.72**
M.A: RA Local No: Sens.: 7.0 B/full: 26.7m^3s^{-1}													
F.A.R: S Level: 71m UE: <.01 FAI: 0.993													
Comment: Velocity-area station without cableway, controlled by a weir of capped sheet piles. Station was re-sited at ID 049 090 on 1/11/80, retaining same name. Water is abstracted from Dungonnell Res. (12.5 Ml/d) - the majority is returned d/s of station. # Catchment is almost entirely basalt with 70% overlain by till. A rural catchment - predominantly improved grassland. No significant centres of habitation.	1996	1194	102										
	1997	1046	89	476	63	3.67	36.2d	19/02	0.70	25/08	8.6	1.91	0.80
	1998	1406	120	818	109	6.32	46.0d	02/11	1.30	08/10	13.0	4.23	1.53
	1999	1393	119	741	99	5.72	73.1d	20/09	0.17	01/08	15.6	1.87	0.22
	2000	1365	116										
203027 Braid at Ballee C.A: 177.2 km²	**72..95**	**1186**		**821**		**4.61**	**161.5**	**15/11 1995**	**0.28**	**18/08 1975**	**9.3**	**3.20**	**0.69**
M.A: RA Local No: Sens.: 5.0													
F.A.R: E Level: 35m UE: .03 FAI: 0.994													
Comment: Velocity-area station with cableway. Flows from 1980 onwards reprocessed in 2002. Two small impounding reservoirs (capacity 409 Ml combined) for a public water extraction of 5 Ml/d. Town effluent returned to river; heavy weed growth in river at Ballee due to effluent discharges. # Geology entirely Upper and Lower Basalt extensively exposed with thin covering of till. Some alluvium, sand and gravel near to the river. Predominantly improved grassland with some coniferous woodland, rising to 400m; some intensive pig and poultry units. Ballymena is the major settlement (pop. 28,700).	1996	1118	94	835	102	4.68	107.7	01/05	1.00	04/08	10.5	2.63	1.13
	1997	1008	85	789	96	4.43	77.8	26/11	1.55	23/08	9.2	2.97	1.77
	1998	1353	114	1226	149	6.89	125.9	02/11	2.09	25/02	12.6	5.37	2.83
	1999	1296	109	1131	138	6.35	130.0	20/09	1.23	03/09	12.6	4.02	1.62
	2000	1309	110	980	119	5.49	95.9	08/12	1.02	23/07	11.6	3.23	1.34
203021 Kellswater at Curry's Bridge C.A: 126.3 km²	**71..95**	**1180**		**788**		**3.15**	**144.7**	**25/08 1986**	**0.09**	**11/08 1983**	**7.5**	**1.57**	**0.25**
M.A: RA Local No: Sens.: 12.0													
F.A.R: N Level: 35m UE: <.01 FAI: 0.992													
Comment: Velocity-area station with cableway and natural control. Gauging station is 1.5km u/s of confluence with R. Main and there is some backing-up at high flows. Flows from 1974 onwards were reprocessed in 2002. Reservoir storage in catchment and abstractions for PWS but net effect is minor. # Catchment geology: basalt overlain by 'till and rock'. Mostly upland - predominantly grassland with some shrub heath and coniferous woodland. No urban development.	1996	1145	97	768	97	3.07	69.5	01/05	0.41	21/09	8.5	1.28	0.50
	1997	1075	91	557	71	2.23	77.2	26/11	0.30	29/08	5.1	1.01	0.44
	1998	1379	117	839	106	3.36	88.7	02/11	0.50	07/07	7.9	1.92	0.60
	1999	1317	112	836	106	3.35	134.9	19/09	0.36	18/06	8.1	1.48	0.46
	2000	1357	115	898	114	3.59	102.2	25/04	0.34	24/07	8.3	1.58	0.43

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
203093	**Maine at Shane's Viaduct** C.A: 707.4 km^2	**83..95**	**1163**		**862**		**19.33**	**298.2**	**21/10 1987**	**0.56**	**27/07 1984**	**41.5**	**13.07**	**2.31**
M.A: RA	Local No: Sens.: 11.0													
F.A.R: RI	Level: m UE: .02 FAI: 0.995													
Comment: Velocity-area station with cableway and natural control. Flows for full period of record reprocessed in 2002. Net effect of abstractions and returns is minor. # Almost entirely basalt overlain by till (covering over 50% of the catchment). Significant upland areas, predominantly improved grassland. Extensive bogland in the north. Contains Ballymena (pop. 28,700 - substantial light industry), and Ranaldstown (pop. 4,300).		1996	1121	96	810	94	18.12	200.4	04/01	0.66	20/07	47.0	10.75	1.63
		1997	1013	87										
		1998	1324	114	1052	122	23.61	184.4	24/10	4.60	28/05	44.5	17.87	5.38
		1999	1299	112	1133	131	25.41	256.3d	20/09	1.84	01/08	57.2	15.13	3.00
		2000	1292	111	1054	122	23.57	208.9	08/12	1.57	24/07	53.2	14.04	2.97
203020	**Moyola at Moyola New Bridge** C.A: 304.3 km^2	**71..95**	**1216**		**861**		**8.30**	**406.8**	**05/01 1980**	**0.31**	**12/07 1977**	**19.1**	**4.89**	**1.32**
M.A: RA	Local No: Sens.: 18.0													
F.A.R: SPGI	Level: 13m UE: .02 FAI: 0.999													
Comment: Velocity-area station with cableway. Multi-arched bridge just d/s of station, area between piers revetted with generally rounded profile, crests horizontal at same level across river. Flows for full period of record reprocessed in 2002. Reservoir storage in catchment. # Mixed geology: some basalt, Carboniferous Limestone, schist and shale overlain with till, sand and gravel. Predominantly grassland with some shrub heath and and bog. Urban areas at Magherafelt (pop. 7,100) and Maghera (pop. 3,600) but no major industry.		1996	1233	101	862	100	8.30	79.6	28/11	1.28	20/07	20.5	4.77	1.57
		1997	1193	98	764	89	7.37	82.8	19/02	1.53	25/08	17.8	4.13	1.78
		1998	1404	115	998	116	9.63	99.6	24/10	1.96	05/06	21.7	6.23	2.23
		1999	1376	113	1126	131	10.86	117.7	24/12	1.94	01/08	27.1	6.38	2.28
		2000	1261	104	968	112	9.31	108.7	08/12	1.35	17/07	19.7	5.88	1.90
203019	**Claudy at Glenone Bridge** C.A: 126.3 km^2	**72..95**	**1104**		**811**		**3.25**	**60.0**	**23/10 1980**	**0.06**	**17/08 1977**	**7.9**	**1.92**	**0.32**
M.A: RA	Local No: Sens.: 13.0													
F.A.R: N	Level: 14m UE: .02 FAI: 0.994													
Comment: Velocity-area station with cableway and natural control. Rock bar with boulders 8m d/s of gauge gives insensitive low flow control. Three arch-road bridge 50m d/s gives medium and high flow control. Flows from 1980 onwards reprocessed in 2002. # Geology: basalt overlain with till and some peat. Catchment is predominantly iproved grassland with some shrub heath; no significant urban areas or major industry.		1996	1077	98	708	87	2.83	23.7	04/01	0.44	20/07	6.7	1.52	0.60
		1997	1061	96	671	83	2.69	26.4	19/02	0.48	30/08	6.4	1.41	0.62
		1998	1277	116	964	119	3.86	28.2	24/10	0.95	05/06	8.7	2.39	1.10
		1999	1298	118	989	122	3.96	35.0	24/12	0.58	01/08	10.3	2.12	0.82
		2000	1199	109	905	112	3.61	34.3	08/12	0.45	23/07	8.4	2.15	0.54
203040	**Lower Bann at Movanagher** C.A: 5209.8 km^2	**80..95**	**1018**		**577**		**95.24**	**316.7**	**09/01 1994**	**10.60**	**05/09 1991**	**215.2**	**45.91**	**13.71**
M.A: RA	Local No: Sens.:													
F.A.R: SR	Level: 7m UE: FAI:													
Comment: Velocity-area station, no cableway, control is masonry weir 800m d/s (built for angling). Flows for full POR reprocessed in 2002. Station measures flow from 37% of NI. Flow regulated by sluices u/s at Portna and Toome. Lough Neagh (385 sq.km) is within catchment, containing 3636 Mm^3 of water. Total net export of water from catchment is approx. 200 Ml/d. # Catchment contains all solid and drift deposits present in N.Ireland. Numerous aquifers developed for PWS. Catchment is agricultural - predominantly improved grassland but with pop. approx. 450,000 concentrated in 8 urban centres.		1996	980	96	535	93	88.18	253.3	14/01	13.81	21/06	198.9	47.91	15.96
		1997	949	93	423	73	69.89	246.5	26/11	14.71	09/06	197.7	30.16	16.11
		1998	1123	110	639	111	105.52	290.8	02/11	**9.46**	**22/03**	228.9	78.90	16.66
		1999	1120	110	620	107	102.47	**360.9**	**24/12**	14.16	30/08	226.8	53.62	16.00
		2000	1082	106	686	119	112.97	*343.0*	*20/12*	11.27	16/08	254.5	63.53	12.74
203028	**Aglvey at Whitehill** C.A: 100.5 km^2	**72..95**	**1229**		**894**		**2.85**	**144.1**	**21/10 1987**	**0.11**	**24/07 1989**	**6.6**	**1.57**	**0.35**
M.A: RA	Local No: Sens.: 14.0													
F.A.R: N	Level: 17m UE: .01 FAI: 1.000													
Comment: Velocity-area station with cableway. Flows from 1975 onwards reprocessed in 2002. # Geology: mainly basalt overlain by till with some peat. Significant proportion of upland, predominantly grassland with significant bog and some shrub heath and coniferous woodland. No urban areas or major industry.		1996	1173	95	794	89	2.52	54.6	22/08	0.23	20/07	7.3	1.24	0.37
		1997	1145	93	686	77	2.19	60.0	31/08	0.29	24/08	5.3	1.01	0.37
		1998	1455	118	1006	113	3.21	64.8	24/10	0.47	08/10	6.6	1.84	0.54
		1999	1506	123	1030	115	3.28	82.9	24/12	0.36	01/08	7.9	1.58	0.51
		2000	1379	112	894	100	2.84	64.4	08/12	0.24	27/07	7.1	1.56	0.34
204001	**Bush at Seneirl Bridge** C.A: 299.2 km^2	**72..95**	**1121**		**684**		**6.49**	**93.9**	**03/10 1981**	**0.22**	**01/09 1983**	**14.5**	**4.13**	**0.89**
M.A: RA	Local No: Sens.: 9.0													
F.A.R: SPG	Level: 25m UE: <.01 FAI: 0.993													
Comment: Velocity-area station with cableway and natural control. Flows for full period of record reprocessed in 2002. # Predominantly basalts with a major fault bisecting the catchment. Some schists in upper reaches with a little greensand. Mixed catchment: predominantly grassland with some horticulture (mainly potatoes), bog, coniferous woodland and shrub heath. No significant urban centres.		1996	1096	98	710	104	6.72	63.5	01/05	1.86	08/04	13.5	4.27	2.11
		1997	995	89	576	84	5.46	49.0	17/11	1.35	24/08	11.5	3.46	1.68
		1998	1325	118	978	143	9.28	71.4	22/10	2.65	26/02	19.2	6.77	2.94
		1999	1315	117	861	126	8.17	69.8	28/11	1.42	02/08	18.6	4.90	1.58
		2000	1235	110	807	118	7.63	65.7	08/12	1.38	27/07	16.3	5.18	1.69
205008	**Lagan at Drumiller** C.A: 84.6 km^2	**74..95**	**1032**		**583**		**1.56**	**43.2**	**27/12 1978**	**>0.00**	**23/08 1995**	**3.7**	**0.77**	**0.07**
M.A: RA	Local No: Sens.: 28.0													
F.A.R: N	Level: 81m UE: .01 FAI: 0.992													
Comment: Velocity-area station with calibration by wading. Flat V weir installed in 1991. Flows from start of 1978 onwards reprocessed in 2002. No water abstractions or significant effluent returns. # Geology: entirely Silurian overlain with till. Catchment rises to over 500m. Predominantly improved grassland. Catchment contains one large village.		1996	1073	104	557	96	1.49	26.9	12/01	0.07	24/09	2.7	0.74	0.09
		1997	1056	102	494	85	1.33	38.5	26/11	0.14	22/04	2.4	0.54	0.17
		1998	1080	105	499	86	1.34	32.4	29/12	0.15	05/06	2.4	0.83	0.21
		1999	1063	103	456	78	1.22	31.0	21/09	0.05	31/07	2.5	0.62	0.09
		2000	1181	114	598	103	1.60	34.8	08/12	0.06	27/07	3.0	0.78	0.10
205005	**Ravernet at Ravernet** C.A: 73.5 km^2	**78-95**	**940**		**517**		**1.21**	**25.3**	**21/10 1987**	**>0.00**	**25/08 1984**	**3.1**	**0.63**	**0.04**
M.A: RA	Local No: Sens.: 45.0													
F.A.R: N	Level: 31m UE: <.01 FAI: 0.949													
Comment: Flat V weir installed autumn 1977, width 8.64m. Height of wing walls 2.1m. Theoretical rating applies up to bankfull; exceedence very unlikely. Previously a VA station - flow data of lesser accuracy, data removed in 2002. Flows from start of 1980 reprocessed in 2002. Natural flow regime; significant storage in headwater loughs, minimal soil cover in many areas. # Geology: quartzite overlain with 'till and rock'. Predominantly improved grassland with some horticulture (mainly potatoes). No significant urban development.		1996	977	104	558	108	1.30	12.8	03/12	0.02	20/07	3.4	0.66	0.05
		1997	981	104	494	96	1.15	**32.1**	**26/11**	0.08	22/07	3.1	0.39	0.11
		1998	1001	106	516	100	1.20	13.5	02/04	0.09	27/05	2.8	0.64	0.13
		1999	931	99	472	91	1.10	16.1	24/12	0.04	31/07	2.8	0.55	0.06
		2000	1103	117	642	124	1.49	23.5	07/11	0.02	27/07	3.9	0.51	0.04
205004	**Lagan at Newforge** C.A: 491.6 km^2	**72..95**	**916**		**537**		**8.37**	**159.0**	**29/12 1978**	**0.41**	**10/09 1991**	**21.0**	**4.42**	**0.94**
M.A: RA	Local No: Sens.: 7.0 B/full: 104.1m^3s^{-1}													
F.A.R: GEI	Level: 2m UE: .04 FAI: 0.986													
Comment: Velocity-area station with cableway. Flows from start of 1980 onwards reprocessed in 2002. Numerous PWS boreholes - pumping capacity total nearly 30 Ml/d. All effluents return to the river. # Geology: 60% Silurian; remainder - Sherwood Sandstone with some breccia, Chalk, Hibernian Greensand and Lower Basalts. Heavily overlain with till; extensive sand and gravel deposits in lower valley. Predominantly improved grassland, some horticulture (mainly potatoes) . Urban/suburban areas include Lisburn (pop. 42,000) and SW areas of Belfast.		1996	929	101	561	104	8.73	75.0	05/01	1.10	22/09	21.5	4.26	1.23
		1997	946	103	512	95	7.98	132.8	26/11	1.36	04/10	20.6	3.40	1.62
		1998	989	108	583	109	9.09	58.9	04/04	1.85	05/06	20.4	5.29	2.17
		1999	960	105	580	108	9.04	75.1	24/12	1.01	04/09	22.5	4.68	1.65
		2000	1058	116	703	131	10.93	142.2	07/11	1.83	22/07	23.6	5.29	2.04
205015	**Cotton at Grandmere** C.A: 19.2 km^2	**90..95**			**370**		**0.22**	**5.6**	**03/01 1994**	**0.01**	**08/09 1991**	**0.5**	**0.13**	**0.01**
M.A: RA	Local No: Sens.: 64.0													
F.A.R:	Level: 14m UE: FAI:													
Comment: Velocity-area station. Flows reprocessed in 2002. # Mostly flat grassland with small urban development. Soil is shallow brown earth with organic alluvium & surface water gleys.		1996			423	114	0.26	3.4	04/01	0.01	25/09	0.6	0.12	0.02
		1997			336	91	0.20	3.2	04/05	0.02	26/09	0.5	0.10	0.03
		1998	990		455	123	0.28	3.9	02/11	0.04	08/10	0.7	0.17	0.05
		1999	891		377	102	0.23	2.7	24/01	0.02	01/08	0.6	0.11	0.03
		2000	1022		463	125	0.28	3.0d	08/12	0.02	05/08	0.7	0.13	0.02
205020	**Enler at Comber** C.A: 61.8 km^2	**83..95**	**921**		**370**		**0.73**	**26.8**	**26/08 1986**	**0.03**	**11/09 1991**	**1.7**	**0.40**	**0.08**
M.A: RA	Local No: Sens.: 19.0													
F.A.R: N	Level: m UE: .04 FAI: 1.000													
Comment: Flat V weir in trapezoidal channel containing the full range of flows. Rating revised following high flow gaugings in 2000/01 (up to 23.6 m^3s^{-1}), all flows reprocessed (producing substantial reduction in highest flows). # Geology: 70% Llandovery, 20% Sherwood S'st, 5% Dolerite and Basalt, and 5% Magnesian L'st. Predominantly grassland but highest proportion (26%) of horticulture (mainly potatoes)for any gauged NI catchment. Some urban/suburban development in the upper reaches - Dundonald, pop. 12,900.		1996	958	104	412	111	0.81	15.0	04/01	0.09	17/09	2.0	0.41	0.11
		1997	941	102	350	95	0.69	13.1	04/05	0.13	04/10	1.6	0.34	0.15
		1998	1025	111	429	116	0.84	15.3	02/11	0.14	08/10	1.8	0.51	0.19
		1999	934	101	379	102	0.74	17.8	24/12	0.09	01/08	1.8	0.38	0.13
		2000	1144	124	536	145	1.05	**33.9**	**08/12**	0.09	26/07	2.1	0.48	0.14

		Period	Rainfall (mm)	% of pre-1996	Runoff (mm)	% of pre-1996	Mean flow (m^3s^{-1})	Peak flow (m^3s^{-1})	Date of peak	Min. daily flow (m^3s^{-1})	Date of min.	10 Percentile (m^3s^{-1})	50 Percentile (m^3s^{-1})	95 Percentile (m^3s^{-1})
205011	**Annacloy at Kilmore Bridge** C.A: 186.6 km^2	**79..95**	*985*		**562**		**3.32**	**51.5**	**03/10 1981**	**0.02**	**28/07 1984**	**8.7**	**1.58**	**0.12**
M.A: RA	Local No: Sens.: 19.0													
F.A.R:	Level: 9m UE: .02 FAI: 0.984													
Comment: Velocity-area station in straight reach (bridge, with piers, 60m upstream). Weed growth can affect low flow levels. Flows for full period of record reprocessed in 2002. Responsive regime. # Silurain solid geology with scattered Tertiary and Caledonian intrusions, overlain by drumlin terrain. Predominantly improved grassland, some urban development (including Ballynahinch - 5,200).		1996	1026	104	686	122	4.05	46.2	04/01	0.20	22/09	10.6	1.90	0.28
		1997	1010	103	611	109	3.62	42.2	24/11	0.31	19/04	9.0	1.34	0.43
		1998	1050	107	653	116	3.86	29.3	29/12	0.35	27/05	8.5	2.02	0.60
		1999	949	96	575	102	3.40	32.8	21/09	0.27	28/07	7.8	1.64	0.33
		2000	1162	118	759	135	4.48	**61.5**	07/11	0.32	23/07	10.4	1.72	0.38
206001	**Clanrye at Mountmill Bridge** C.A: 120.3 km^2	**74..95**	*988*		**551**		**2.10**	**33.1**	**29/12 1978**	**0.08**	**15/08 1983**	**4.8**	**1.17**	**0.21**
M.A: RA	Local No: Sens.: 10.0 B/full: 18.9m^3s^{-1}													
F.A.R: N	Level: 16m UE: <.01 FAI: 0.976													
Comment: Velocity-area station calibrated by wading and from footbridge. Flows for full period of record reprocessed in 2002. # Entirely Old Red Sandstone. Completely rural: predominantly improved grassland with some horticulture (mainly potatoes).		1996	985	100	510	93	1.94	20.6	05/01	0.18	22/09	4.3	0.97	0.24
		1997	962	97	456	83	1.74	17.1	26/11	0.38	03/05	3.9	0.79	0.43
		1998	1062	107	548	99	2.09	20.0	04/01	0.49	26/02	4.4	1.10	0.56
		1999	1078	109	504	91	1.92	19.7	22/12	0.20	24/08	4.8	0.95	0.24
		2000	1150	116	579	105	2.20	23.0	07/11	0.39	09/09	4.8	1.20	0.47
206002	**Jerretspass at Jerretspass** C.A: 107.8 km^2	**72..95**	**890**		**226**		**0.77**	**18.5**	**22/10 1987**	**>0.00**	**03/10 1972**	**1.9**	**0.33**	**0.02**
M.A: RA	Local No: Sens.: 12.0													
F.A.R: N	Level: 11m UE: .01 FAI: 0.977													
Comment: Velocity-area station calibrated by wading and from footbridge. Flows from start of 1981 onwards reprocessed in 2002. Low catchment runoff - effective catchment area restricted to approx. 73 km^2 by canal which intercepts western tributaries, except during high flows when spillage occurs to the Jerretspass. # Geology: Llandovery in age. Occasional igneous intrusions. Catchment is entirely rural: predominantly improved grassland with some horticulture (mainly potatoes).		1996	829	93	297	131	1.01	10.0	05/01	0.19	19/09	2.5	0.52	0.22
		1997	858	96	334	148	1.14	11.1	26/11	0.28	23/04	2.6	0.53	0.32
		1998	924	104	310	137	1.06	10.5	05/01	0.25	31/08	2.3	0.59	0.33
		1999	977	110	278	123	0.95	11.1	22/12	0.15	02/08	2.4	0.42	0.17
		2000	995	112	304	135	1.04	14.9	07/11	0.18	22/07	2.4	0.44	0.21
236005	**Colebrooke at Ballindarragh Bridge** C.A: 313.6 km^2	**75..95**	**1151**		**758**		**7.53**	**140.8**	**24/10 1995**	**0.22**	**03/11 1982**	**18.8**	**3.71**	**0.66**
M.A: RA	Local No: Sens.: 12.0													
F.A.R: N	Level: 53m UE: <.01 FAI: 0.994													
Comment: Velocity-area station with cableway and natural control. Flows from start of 1987 reprocessed in 2002. # Geology: ORS in headwaters, Carboniferous formations (l'st and s'sts) in lower catchment. Land use: predominantly grassland, significant coniferous woodland, some bog, no significant urban development.		1996	1175	102	804	106	7.97	**143.1**	**06/08**	0.61	20/07	19.2	4.04	0.81
		1997	1131	98	659	87	6.55	105.3	17/11	0.76	23/08	18.1	2.92	0.93
		1998	1447	126	1080	142	10.74	129.5	24/10	0.99	27/05	25.6	6.07	1.35
		1999	1293	112	994	131	9.88	127.7	28/11	0.72	01/08	26.4	4.56	0.96
		2000	1218	106	919	121	9.11	103.0	08/12	0.51	25/07	20.4	5.52	0.80
236007	**Sillees at Drumrainey Bridge** C.A: 166.3 km^2	**81..95**	**1432**		**1007**		**5.31**	**37.3**	**21/12 1991**	**0.04**	**09/08 1989**	**13.0**	**3.47**	**0.32**
M.A: RA	Local No: Sens.: 18.0													
F.A.R: E	Level: 44m UE: <.01 FAI: 0.892													
Comment: Velocity-area station with cableway. Flows from start of 1984 onwards reprocessed in 2002. Some natural storage provided by small lakes in headwaters. # Catchment developed mainly on Carboniferous formations (mostly l'st and shales). Predominantly grassland with significant coniferous woodland. No significant urban development.		1996	1323	92	913	91	4.80	22.5	11/02	0.21	21/09	12.0	3.05	0.42
		1997	1344	94	969	96	5.11	23.0	30/12	0.52	26/08	11.4	3.63	0.81
		1998	1666	116	1362	135	7.18	30.0	29/10	0.74	28/05	15.5	5.43	1.07
		1999	1562	109	1367	136	7.21	28.5	02/12	0.67	18/06	17.6	4.96	1.02
		2000	1456	102	1220	121	6.42	23.4	02/03	0.27	27/07	14.8	4.70	0.44

CONCISE REGISTER OF GAUGING STATIONS

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The Concise Register of Gauging Stations lists the river and station names of all station featured in the Hydrometric Register tabulated in order of their National River Flow Archive number (see page 4) – the station locations are shown on the relevant regional maps. For a few stations (not operated by the UK environment agencies) an alphabetic code is given to identify the measuring authority (see page 201). The numbers in parentheses indicate the page(s) on which details of the NRFA data holdings of gauged and, if available, naturalised flows are summarised (see below).

Summary of Archived Data

This tabulation summarises – in decadal blocks – the river flow and catchment areal rainfall data held on the National River Flow Archive (to the end of 2000). Part I relates to daily gauged flows, monthly peaks and monthly catchment rainfall*. Part II relates to holdings of naturalised daily and monthly flows. The key to the letters used to identify the data holdings for each year on the individual station records is given below. Emboldening is used to emphasise those years with complete daily gauged or naturalised flows.

To help data users select datasets most appropriate to their needs, the featured stations are grouped according to the length of their flow records. Two stations – the Lee at Feildes Weir (38001) and the Thames at Kingston (39001) – have continuous records commencing in 1883 and earlier monthly datasets are held for a few monitoring sites, e.g. Wendover Springs (39147). Sporadic additional historical data may be held by the measuring authorities who also maintain substantial data holdings for secondary and temporary gauging sites. The British Hydrological Society's Chronology of British Hydrological Events (see page 12) is a valuable source of historical river flow (and groundwater level) information.

Summary of Archived Data – Key

Gauged daily flows, monthly peaks and monthly rainfall

	Complete rainfall	Incomplete or missing rainfall
Complete daily and complete peaks	A	a
Complete daily and partial peaks	B	b
Complete daily and no peaks	C	c
Partial daily and complete peaks	D	d
Partial daily and no peaks	E	e
No flow data	?	–

Up-to-date summaries of data holdings may be found on the NRFA Website.

Naturalised daily and monthly flows

Complete daily and complete monthly	A
Partial daily and complete monthly	B
Partial daily and partial monthly	C
Partial daily and complete monthly	D
No daily and complete monthly	E
No daily and partial monthly	F
No naturalised flow data	

*For some recently commissioned gauging stations, monthly catchment rainfall totals have been derived back to 1961. Gauging stations in this category appear in the section of the Summary of Archived Data featuring flow records commencing between 1950 and 1969.

Concise Register of Gauging Stations

Station number	River and Station name
001001	Wick at Tarroul, *(170)*
002001	Helmsdale at Kilphedir, *(170)*
002002	Brora at Bruachrobie, *(170)*
003001	Shin at Lairg, *(166)*
003002	Carron at Sgodachail, *(170)*
003003	Oykel at Easter Turnaig, *(170)*
003004	Cassley at Rosehall, *(170)*
003005	Shin at Inveran, *(166)*
004001	Conon at Moy Bridge, *(165)*
004003	Alness at Alness, *(170)*
004004	Blackwater at Contin, *(166)*
004005	Meig at Glenmeannie, *(170)*
004006	Bran at Dosmucheran, *(170)*
004007	Blackwater at Garve, *(170)*
004008	Newhall Burn at Newhall Bridge, *(170)*
004009	Peffery at Strathpeffer STW, *(170)*
005001	Beauly at Erchless (SE), *(166)*
005002	Farrar at Struy, *(166)*
005003	Glass at Kerrow Wood, *(166)*
005004	Glass at Fasnakyle, *(166)*
006001	Ness at Ness Castle Farm, *(165)*
006003	Moriston at Invermoriston, *(165)*
006006	Allt Bhlaraidh at Invermoriston, *(166)*
006007	Ness at Ness-side, *(166, 173)*
006008	Enrick at Mill of Tore, *(170)*
006009	Moriston at Levishie, *(170)*
007001	Findhorn at Shenachie, *(166)*
007002	Findhorn at Forres, *(166)*
007003	Lossie at Sheriffmills, *(166, 172)*
007004	Nairn at Firhall, *(170)*
007005	Divie at Dunphail, *(170)*
007006	Lossie at Torwinny, *(170)*
008001	Spey at Aberlour, *(165, 172)*
008002	Spey at Kinrara, *(166)*
008003	Spey at Ruthven Bridge, *(166)*
008004	Avon at Delnashaugh, *(166)*
008005	Spey at Boat of Garten, *(166, 173)*
008006	Spey at Boat o Brig, *(166)*
008007	Spey at Invertruim, *(166)*
008008	Tromie at Tromie Bridge, *(166)*
008009	Dulnain at Balnaan Bridge, *(166)*
008010	Spey at Grantown, *(166)*
008011	Livet at Minmore, *(170)*
008013	Feshie at Feshie Bridge, *(166)*
008015	Fiddich at Auchindoun, *(166)*
008016	Conglass Water at Auchriachan, *(166)*
008017	Burn of Carron at Dailuaine, *(166)*
009001	Deveron at Avochie, *(166)*
009002	Deveron at Muiresk, *(166)*
009003	Isla at Grange, *(166)*
009004	Bogie at Redcraig, *(170)*
009005	Allt Deveron at Cabrach, *(165)*
009006	Deskford Burn at Cullen, *(166)*
009007	Forgue Burn at Inverkeithny, *(166)*
010001	Ythan at Ardlethen, *(166)*
010002	Ugie at Inverugie, *(166)*
010003	Ythan at Elion, *(170)*
011001	Don at Parkhill, *(166)*
011002	Don at Haughton, *(166)*
011003	Don at Bridge of Alford, *(166)*
011004	Urie at Pitcaple, *(170)*
011005	Don at Mill of Newe, *(166)*
012001	Dee at Woodend, *(165)*
012002	Dee at Park, *(170, 173)*
012003	Dee at Polhollick, *(170)*
012004	Gimock Burn at Littlemill, *(166, 173)*
012005	Muick at Invermuick, *(170)*
012006	Gairn at Invergairn, *(170)*
012007	Dee at Mar Lodge, *(170)*
012008	Feugh at Heugh Head, *(170)*
012009	Water of Dye at Charr, *(166, 173)*
013001	Bervie at Inverbervie, *(170)*
013002	Luther Water at Luther Bridge, *(170)*
013003	South Esk at Stannochy Bridge, *(170)*
013004	Prosen Water at Prosen Bridge, *(170)*
013005	Lunan Water at Kirkton Mill, *(170)*
013007	North Esk at Logie Mill, *(170, 173)*
013008	South Esk at Brechin, *(170)*
013009	West Water at Dalhouse Bridge, *(170)*
013010	Brothock Water at Arbroath, *(166)*
013012	South Esk at Gella Bridge, *(166)*
013017	Colliston Burn at Colliston, *(166)*
014001	Eden at Kemback, *(166, 173)*
014002	Dighty Water at Balmossie Mill, *(166, 173)*
014005	Motray Water at St Michaels, *(170)*
014006	Monikie Burn at Panbride, *(170)*
014007	Craigmill Burn at Craigmill, *(166)*
014009	Eden at Strathmiglo, *(166)*
014010	Motray Water at Kilmany, *(166)*
015001	Isla at Forter, *(166)*
015002	Newton Burn at Newton, *(166)*
015003	Tay at Caputh, *(165, 173)*
015004	Inzion at Loch of Lintrathen, *(165)*
015005	Melgan at Loch of Lintrathen, *(165)*
015006	Tay at Ballathie, *(166, 172)*
015007	Tay at Pitnacree, *(166, 173)*
015008	Dean Water at Cookston, *(166, 173)*
015010	Isla at Wester Cardean, *(170, 173)*
015011	Lyon at Comrie Bridge, *(166, 173)*
015012	Tummel at Pitlochry, *(170, 173)*
015013	Almond at Almondbank, *(166, 173)*
015014	Ardle at Kindrogan, *(170)*
015015	Almond at Newton Bridge, *(170)*
015016	Tay at Kenmore, *(170, 173)*
015017	Braan at Ballinloan, *(170, 173)*
015018	Lyon at Moar, *(166)*
015021	Lunan Burn at Mill Bank, *(170)*
015023	Braan at Hermitage, *(170)*
015024	Dochart at Killin, *(170, 173)*
015025	Ericht at Craighall, *(170)*
015027	Garry Burn at Loakmill, *(170)*
015028	Ordie Burn at Luncarty, *(170)*
015029	Alyth Burn at Pitcrocknie, *(166)*
015030	Dean Water at Dean Bridge, *(166)*
015032	Ordie Burn at Jackstone, *(166)*
015034	Garry at Killiecrankie, *(166)*
015035	Tummel at Kinloch Rannoch, *(170)*
015038	Gaur at Bridge of Gaur, *(166)*
015039	Tilt at Marble Lodge, *(166)*
015041	Lyon at Camusvrachan, *(166)*
016001	Earn at Kinkell Bridge, *(165, 172)*
016002	Earn at Aberuchill, *(166)*
016003	Ruchill Water at Cultybraggan, *(166)*
016004	Earn at Forteviot Bridge, *(170, 173)*
016007	Ruthven Water at Aberuthven, *(166)*
017001	Carron at Headswood, *(166, 172)*
017002	Leven at Leven, *(166, 172)*
017003	Bonny Water at Bonnybridge, *(170, 173)*
017004	Ore at Balfour Mains, *(170, 173)*
017005	Avon at Polmonthill, *(170, 173)*
017008	South Queich at Kinross, *(170)*
017012	Red Burn at Castlecary, *(170)*
017015	North Queich at Lathro, *(170)*
017016	Lochty Burn at Whinnyhall, *(166)*
017018	Greens Burn at Darnleys Cottage, *(170)*
018001	Allan Water at Kinbuck, *(166, 173)*
018002	Devon at Glenochil, *(166, 172)*
018003	Teith at Bridge of Teith, *(166, 172)*
018005	Allan Water at Bridge of Allan, *(170, 173)*
018007	Devon at Fossoway Bridge, *(170)*
018008	Leny at Anie, *(170, 173)*
018010	Forth at Gargunnock, *(170)*
018011	Forth at Craigforth, *(170)*
018013	Black Devon at Fauld Mill, *(166)*
018014	Bannock Burn at Bannockburn, *(170)*
018015	Eas Gobhain at Loch Venachar, *(166)*
018016	Kelty Water at Clashmore, *(170)*
018017	Monachyle Burn at Balquhidder, *(166)*
018018	Kirkton Burn at Balquhidder, *(170)*
018019	Comer Burn at Comer, *(170)*
018020	Loch Ard Burn at Duchray, *(166)*
018021	Loch Ard Burn at Elrig, *(166)*
018022	Avon Dhu at Milton, *(170)*
018023	Monachyle Burn at Upper Monachyle, *(166)*
019001	Almond at Craigiehall, *(166, 172)*
019002	Almond at Almond Weir, *(166, 172)*
019003	Breich Water at Breich Weir, *(166, 172)*
019004	North Esk at Dalmore Weir, *(166, 172)*
019005	Almond at Almondell, *(166, 172)*
019006	Water of Leith at Murrayfield, *(166, 172)*
019007	Esk at Musselburgh, *(166, 172)*
019008	South Esk at Prestonholm, *(166, 172)*
019009	Bog Burn at Cobbinshaw, *(166, 172)*
019010	Braid Burn at Liberton, *(166, 172)*
019011	North Esk at Dalkeith Palace, *(166, 173)*
019012	Water of Leith at Colinton, *(166)*
019017	Gogar Burn at Turnhouse, *(170)*
019020	Almond at Whitburn, *(170)*
019021	South Esk at Cowbridge, *(170)*
020001	Tyne at East Linton, *(166, 172)*
020002	West Peffer Burn at Luffness, *(166, 172)*
020003	Tyne at Spilmersford, *(166, 172)*
020004	East Peffer Burn at Lochhouses, *(166, 172)*
020005	Birns Water at Saltoun Hall, *(166, 173)*
020006	Biel Water at Belton House, *(170, 173)*
020007	Gifford Water at Lennoxlove, *(166, 173)*
021001	Fruid Water at Fruid (LRWD), *(166, 172)*
021002	Whiteadder Water at Hungry Snout, *(166, 172)*
021003	Tweed at Peebles, *(166, 172)*
021004	Watch Water at Watch Water Reservoir, *(166, 172)*
021005	Tweed at Lyne Ford, *(166, 172)*
021006	Tweed at Boleside, *(166, 172)*
021007	Ettrick Water at Lindean, *(166, 172)*
021008	Teviot at Ormiston Mill, *(166, 172)*
021009	Tweed at Norham, *(166, 172)*
021010	Tweed at Dryburgh, *(166, 172)*
021011	Yarrow Water at Philiphaugh, *(166, 172)*
021012	Teviot at Hawick, *(166, 172)*
021013	Gala Water at Galashiels, *(166, 172)*
021014	Tweed at Kingledores, *(166, 172)*
021015	Leader Water at Earlston, *(166, 172)*
021016	Eye Water at Eyemouth Mill, *(166, 172)*
021017	Ettrick Water at Brockhoperig, *(166, 172)*
021018	Lyne Water at Lyne Station, *(166, 172)*
021019	Manor Water at Cademuir, *(166, 172)*
021020	Yarrow Water at Gordon Arms, *(166, 172)*
021021	Tweed at Sprouston, *(166, 172)*
021022	Whiteadder Water at Hutton Castle, *(166, 172)*
021023	Leet Water at Coldstream, *(166, 173)*
021024	Jed Water at Jedburgh, *(166, 172)*
021025	Ale Water at Ancrum, *(166, 173)*
021026	Tima Water at Deephope, *(166, 173)*
021027	Blackadder Water at Mouth Bridge, *(166, 173)*
021028	Menzion Burn at Menzion Farm, *(165)*
021030	Megget Water at Henderland, *(166, 172)*
021031	Till at Etal, *(166)*
021032	Glen at Kirknewton, *(166)*
021034	Yarrow Water at Craig Douglas, *(166, 172)*
022001	Coquet at Morwick, *(166)*
022002	Coquet at Bygate, *(166)*
022003	Usway Burn at Shillmoor, *(166)*
022004	Aln at Hawkhill, *(166)*
022006	Blyth at Hartford Bridge, *(166)*
022007	Wansbeck at Mitford, *(166)*
022008	Alwin at Clennell, *(166)*
022009	Coquet at Rothbury, *(170)*
023001	Tyne at Bywell, *(166, 172)*
023002	Derwent at Eddys Bridge, *(166, 172)*
023003	North Tyne at Reaverhill, *(166, 172)*
023004	South Tyne at Haydon Bridge, *(166)*
023005	North Tyne at Tarset, *(166)*
023006	South Tyne at Featherstone, *(166)*
023007	Derwent at Rowlands Gill, *(166, 172)*
023008	Rede at Rede Bridge, *(166, 173)*
023009	South Tyne at Alston, *(166)*
023010	Tarset Burn at Greenhaugh, *(166)*
023011	Kielder Burn at Kielder, *(166)*
023012	East Allen at Wide Eals, *(170)*
023013	West Allen at Hindley Wrae, *(170)*
023014	North Tyne at Kielder temporary, *(166)*
023015	North Tyne at Barrasford (NEW), *(165, 172)*
023016	Ouse Burn at Crag Hall, *(166)*
023017	Team at Team Valley, *(170)*
023018	Ouse Burn at Woolsington, *(166)*
023022	North Tyne at Uglydub, *(166)*
023023	Tyne at Riding Mill, *(166)*
024001	Wear at Sunderland Bridge, *(166, 172)*
024002	Gaunless at Bishop Auckland, *(166)*
024003	Wear at Stanhope, *(166, 172)*
024004	Bedburn Beck at Bedburn, *(166)*
024005	Browney at Burn Hall, *(166)*
024006	Rookhope Burn at Eastgate, *(166)*
024007	Browney at Lanchester, *(166)*
024008	Wear at Witton Park, *(170)*
024009	Wear at Chester le Street, *(170)*
024011	Wear at Burnhope Reservoir, *(166)*
025001	Tees at Broken Scar, *(166, 172)*
025002	Tees at Dent Bank, *(166, 173)*
025003	Trout Beck at Moor House, *(166)*
025004	Skerne at South Park, *(166, 172)*
025005	Leven at Leven Bridge, *(166)*
025006	Greta at Rutherford Bridge, *(166)*
025007	Clow Beck at Croft, *(166)*
025008	Tees at Barnard Castle, *(166, 172)*
025009	Tees at Low Moor, *(166)*
025010	Baydale Beck at Mowden Bridge, *(166)*
025011	Langdon Beck at Langdon, *(166)*
025012	Harwood Beck at Harwood, *(166)*
025013	Billingham Beck at Thorpe Thewles, *(166)*
025018	Tees at Middleton in Teesdale, *(170)*
025019	Leven at Easby, *(170)*
025020	Skerne at Preston le Skerne, *(170)*
025021	Skerne at Bradbury, *(170)*
025022	Balder at Balderhead Reservoir, *(170)*
025023	Tees at Cow Green Reservoir, *(170)*
026001	West Beck at Wansford Bridge (YW), *(166)*
026002	Hull at Hempholme Lock, *(166, 172)*
026003	Foston Beck at Foston Mill, *(166)*
026004	Gypsey Race at Bridlington, *(170)*
026005	Gypsey Race at Boynton, *(170)*
026006	Elmswell Beck at Little Driffield, *(170)*
026007	Catchwater at Withernwick, *(166)*
026008	Mires Beck at North Cave, *(170)*
026009	West Beck at Snakeholme Lock, *(166)*
027001	Nidd at Hunsingore Weir, *(165, 172)*
027002	Wharfe at Flint Mill Weir, *(165, 172)*
027003	Aire at Beal Weir, *(166, 172)*
027004	Calder at Newlands, *(166, 172)*
027005	Nidd at Gouthwaite Reservoir, *(165, 172)*
027006	Don at Hadfields Weir, *(166, 172)*
027007	Ure at Westwick Lock, *(166, 172)*
027008	Swale at Leckby Grange, *(166)*
027009	Ouse at Skelton, *(166, 172)*
027010	Hodge Beck at Bransdale Weir, *(165)*
027011	Washburn at Lindley Wood Res., *(166, 172)*
027012	Hebden Water at High Greenwood, *(166, 172)*
027013	Ewden Beck at More Hall Res., *(166, 172)*

Station number	River and Station name
027014	Rye at Little Habton, *(166)*
027015	Derwent at Stamford Bridge, *(166, 172)*
027016	Little Don at Underbank Reservoir, *(166, 172)*
027017	Loxley at Damflask Reservoir, *(166, 172)*
027018	Ryburn at Ryburn Reservoir, *(166, 172)*
027019	Booth Dean Clough at Booth Wood Mill, *(166, 172)*
027020	Scout Dike Stream at Scout Dike Res., *(166, 172)*
027021	Don at Doncaster, *(166, 172)*
027022	Don at Rotherham Weir, *(166, 172)*
027023	Dearne at Barnsley Weir, *(166, 172)*
027024	Swale at Richmond, *(166, 172)*
027025	Rother at Woodhouse Mill, *(166, 172)*
027026	Rother at Whittington, *(166, 172)*
027027	Wharfe at Ilkley, *(166, 172)*
027028	Aire at Armley, *(166, 172)*
027029	Calder at Elland, *(166, 172)*
027030	Dearne at Adwick, *(166, 172)*
027031	Colne at Colne Bridge, *(167, 172)*
027032	Hebden Beck at Hebden, *(167, 172)*
027034	Ure at Kilgram Bridge, *(167)*
027035	Aire at Kildwick Bridge, *(167)*
027038	Costa Beck at Gatehouses, *(170)*
027039	Holme at Digley Reservoir, *(167, 172)*
027040	Doe Lea at Staveley, *(170)*
027041	Derwent at Buttercrambe, *(167)*
027042	Dove at Kirkby Mills, *(170)*
027043	Wharfe at Addingham, *(170)*
027044	Blackfoss Beck at Sandhills Bridge, *(170)*
027047	Snaizeholme Beck at Low Houses, *(170)*
027048	Derwent at West Ayton, *(170)*
027049	Rye at Ness, *(170)*
027050	Esk at Sleights, *(170)*
027051	Crimple at Burn Bridge, *(170)*
027052	Whitting at Sheepbridge, *(170)*
027053	Nidd at Birstwith, *(170)*
027054	Hodge Beck at Cherry Farm, *(170)*
027055	Rye at Broadway Foot, *(170)*
027056	Pickering Beck at Ings Bridge, *(170)*
027057	Seven at Normanby, *(170)*
027058	Riccal at Crook House Farm, *(170)*
027059	Laver at Ripon, *(170)*
027061	Colne at Longroyd Bridge, *(170)*
027062	Nidd at Skip Bridge, *(170)*
027063	Dibb at Grimwith Reservoir, *(170)*
027064	Went at Walden Stubbs, *(170, 173)*
027065	Holme at Queens Mill, *(170)*
027066	Blackburn Brook at Ashlowes, *(170)*
027067	Sheaf at Highfield Road, *(170)*
027068	Ryburn at Ripponden, *(167)*
027069	Wiske at Kirby Wiske, *(170)*
027070	Eller Beck at Skipton, *(170)*
027071	Swale at Crakehill, *(167)*
027072	Worth at Keighley, *(170)*
027073	Brompton Beck at Snainton Ings, *(170)*
027074	Spen Beck at Northorpe, *(170)*
027075	Bedale Beck at Leeming, *(170)*
027076	Bielby Beck at Thornton Lock, *(170)*
027077	Bradford Beck at Shipley, *(170)*
027079	Calder at Methley, *(170, 173)*
027080	Aire at Lemonroyd, *(170)*
027081	Oulton Beck at Farrer Lane, *(170)*
027082	Cundall Beck at Bat Bridge, *(170)*
027083	Foss at Huntington, *(170, 173)*
027084	Eastburn Beck at Crosshills, *(167)*
027085	Cod Beck at Dalton Bridge, *(167, 173)*
027086	Skell at Alma Weir, *(167)*
027087	Derwent at Low Marishes, *(167, 173)*
027088	Calder at Caldene Bridge, *(167, 173)*
027089	Wharfe at Tadcaster, *(167, 173)*
027090	Swale at Catterick Bridge, *(167)*
028001	Derwent at Yorkshire Bridge, *(165, 172)*
028002	Blithe at Hamstall Ridware, *(165, 172)*
028003	Tame at Water Orton, *(167)*
028004	Tame at Lea Marston, *(167)*
028005	Tame at Elford, *(167)*
028006	Trent at Great Haywood, *(167)*
028007	Trent at Shardlow, *(167)*
028008	Dove at Rocester Weir, *(167)*
028009	Trent at Colwick, *(167)*
028010	Derwent at Longbridge/St.Mary's Br., *(165)*
028011	Derwent at Matlock Bath, *(167)*
028012	Trent at Yoxall, *(167, 173)*
028014	Sow at Milford, *(167)*
028015	Idle at Mattersey, *(167)*
028016	Ryton at Scriby Park, *(167)*
028017	Devon at Cotham, *(167)*
028018	Dove at Marston on Dove, *(167)*
028019	Trent at Drakelow Park, *(167)*
028020	Churnet at Rocester, *(167)*
028021	Derwent at Draycott, *(167)*
028022	Trent at North Muskham, *(167)*
028023	Wye at Ashford, *(167)*
028024	Wreake at Syston Mill, *(167)*
028025	Sence at Ratcliffe Culey, *(167)*
028026	Anker at Polesworth, *(167)*
028027	Erewash at Sandiacre, *(167)*
028028	Soar at Wanlip, *(170)*
028029	Kingston Brook at Kingston Hall, *(167)*
028030	Black Brook at Onebarrow, *(167)*
028031	Manifold at Ilam, *(167)*
028032	Meden at Church Warsop, *(167)*
028033	Dove at Hollinsclough, *(167)*
028035	Leen at Triumph Road Nottingham, *(167)*
028036	Poulter at Twyford Bridge, *(167)*
028037	Derwent at Mytham Bridge, *(170)*
028038	Manifold at Hulme End, *(167)*
028039	Rea at Calthorpe Park, *(167)*
028040	Trent at Stoke on Trent, *(167)*
028041	Hamps at Waterhouses, *(167)*
028043	Derwent at Chatsworth, *(167)*
028044	Poulter at Cuckney, *(167)*
028045	Meden/Maun at Bothamsall/Haughton, *(167)*
028046	Dove at Izaak Walton, *(167)*
028047	Oldcoates Dyke at Blyth, *(170)*
028048	Amber at Wingfield Park, *(170)*
028049	Ryton at Worksop, *(170)*
028050	Torne at Auckley, *(170)*
028052	Sow at Great Bridgford, *(170)*
028053	Penk at Penkridge, *(170)*
028054	Sence at Blaby, *(170)*
028055	Eccleshourne at Duffield, *(170)*
028056	Rothley Brook at Rothley, *(170)*
028058	Henmore Brook at Ashbourne, *(170)*
028059	Maun at Mansfield STW, *(167)*
028060	Dover Beck at Lowdham, *(170)*
028061	Churnet at Basford Bridge, *(170)*
028066	Cole at Coleshill, *(170)*
028067	Derwent at Church Wilne, *(170)*
028070	Burbage Brook at Burbage, *(167)*
028072	Greet at Southwell, *(170)*
028073	Ashop at Ashop diversion, *(170)*
028074	Soar at Kegworth, *(167)*
028075	Derwent at Slippery Stones, *(170)*
028076	Tutbury Millfleam at Rolleston, *(167)*
028079	Meece Brook at Shallowford, *(170)*
028080	Tame at Lea Marston Lakes, *(167)*
028081	Tame at Bescot, *(170)*
028082	Soar at Littlethorpe, *(170)*
028083	Trent at Darlaston, *(170)*
028085	Derwent at St. Marys Bridge, *(165)*
028086	Sence at South Wigston, *(170)*
028087	Tame at Perry Park, *(170)*
028091	Ryton at Blyth, *(170)*
028093	Soar at Pillings Lock, *(170)*
028102	Blythe at Whitacre, *(170)*
028103	Henmore Brook at Carsington Outflow, *(170)*
028115	Maun at The Dykes, *(170)*
028116	Maun at Whitewater Bridge, *(170)*
028117	Derwent at Whatstandwell, *(170)*
029001	Waithe Beck at Brigsley, *(167)*
029002	Great Eau at Claythorpe Mill, *(167)*
029003	Lud at Louth, *(167)*
029004	Ancholme at Bishopbridge, *(167)*
029005	Rase at Bishopbridge, *(170)*
029009	Ancholme at Toft Newton, *(170)*
030001	Witham at Claypole Mill, *(167)*
030002	Barlings Eau at Langworth Bridge, *(167)*
030003	Bain at Fulsby Lock, *(167, 172)*
030004	Lymn at Partney Mill, *(167)*
030005	Witham at Saltersford total, *(167)*
030006	Slea at Leasingham Mill, *(170)*
030011	Bain at Goulceby Bridge, *(170)*
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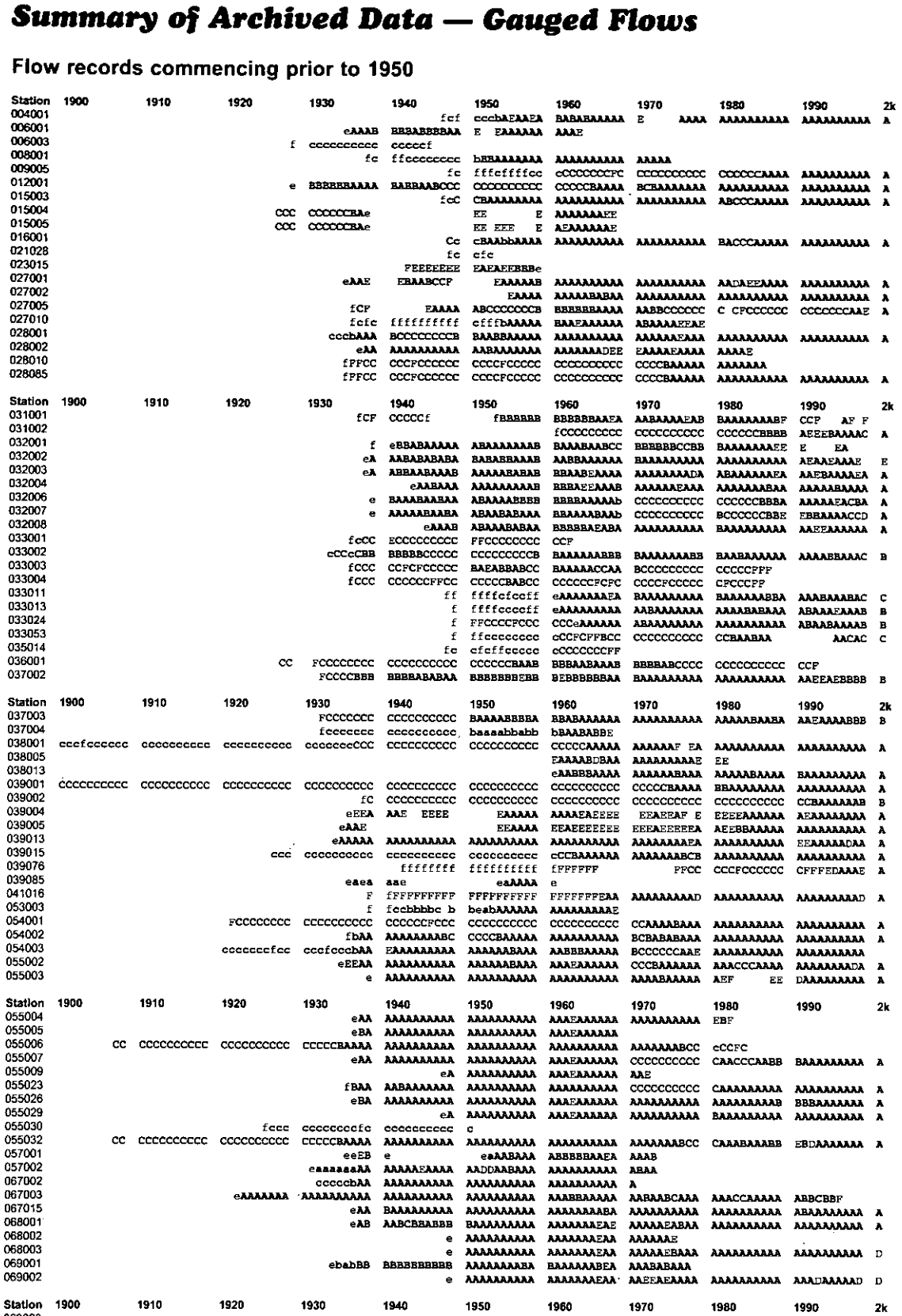
202001	Roe at Ardnargle, *(171)*
202002	Faughan at Drumahoe, *(171)*
203010	Blackwater at Maydown Bridge, *(169)*
203011	Maine at Dromona, *(171)*
203012	Ballinderry at Ballinderry Bridge, *(171)*
203017	Upper Bann at Dynes Bridge, *(171)*
203018	Six-Mile Water at Antrim, *(171)*
203019	Claudy at Glenone Bridge, *(171)*
203020	Moyola at Moyola New Bridge, *(171)*
203021	Kellswater at Curry's Bridge, *(171)*
203024	Cusher at Gamble's Bridge, *(171)*
203025	Callan at Martin's Bridge, *(171)*
203026	Glenavy at Glenavy, *(171)*
203027	Braid at Ballee, *(171)*
203028	Agivey at Whitehill, *(171)*
203029	Six Mile Water at Ballyclare, *(171)*
203033	Upper Bann at Bannfield, *(171)*
203038	Rocky at Rocky Mountain, *(171)*
203039	Clogh at Tullynewey, *(171)*
203040	Lower Bann at Movanagher, *(169)*
203042	Crumlin at Cidercourt Bridge, *(171)*
203043	Oonawater at Shanmoy, *(171)*
203046	Rathmore Burn at Rathmore Br., *(171)*
203092	Maine at Dunminning, *(171)*
203093	Maine at Shane's Viaduct, *(171)*
204001	Bush at Seneirl Bridge, *(171)*
205004	Lagan at Newforge, *(169)*
205005	Ravernet at Ravernet, *(171)*
205008	Lagan at Drumiller, *(169)*
205010	Lagan at Banoge, *(171)*
205011	Annacloy at Kilmore Bridge, *(171)*
205015	Cotton at Grandmere, *(171)*
205020	Enler at Comber, *(171)*
206001	Clanrye at Mountmill Bridge, *(171)*
206002	Jerretspass at Jerretspass, *(171)*
236005	Colebrooke at Ballindarragh Br., *(171)*
236007	Sillees at Drumrainey Bridge, *(171)*

Summary of Archived Data — Gauged Flows

Flow records commencing prior to 1950



Station	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2k
004001					fcf	ccchAEAAEA	BABABAAAAA	E AAAA	AAAAAAAAAA	AAAAAAAAAA	A
006001				eAAAB	BBBABBBBAA	E EAAAAAA	AAAE				
006003			f	ccccccccce	ccccccf						
008001				fc	fffccccccc	bEEAAAAAAA	AAAAAAAAAA	AAAAA			
009005					fc	fffeffffcc	eCCCCCCCFC	CCCCCCCCCC	CCCCCCAAAA	AAAAAAAAAA	A
012001			e	BBBBBBAAAA	BABBAABCCC	CCCCCCCCCC	CCCCCBAAAA	BCBAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
015003					fcC	CBAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	ABCCCAAAAA	AAAAAAAAAA	A
015004			CCC	CCCCCCBAe		EE E	AAAAAAAEE				
015005			CCC	CCCCCCBAe		EE EEE E	AEAAAAAAE				
016001					Cc	cBAAbbAAAA	AAAAAAAAAA	AAAAAAAAAA	BACCCAAAAA	AAAAAAAAAA	A
021028					fc	cfc					
023015					FEEEEEEE	EAEAEEBBBe					
027001				eAAE	EBAABCCF	EAAAAAB	AAAAAAAAAA	AAAAAAAAAA	AADAEEAAAA	AAAAAAAAAA	A
027002						EAAAA	AAAAABABAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
027005				fCF	EAAAA	ABCCCCCCCB	BBBBBBAAAA	AABBCCCCCC	C CFCCCCCC	CCCCCCCAAE	A
027010				fcfc	fffffffff	cffffbAAAAA	BAAEAAAAAA	ABAAAAEEAE			
028001				ccchAAA	BCCCCCCCCB	BAABBAAAAA	AAAAAAAAAA	AAAAAAEAAA	AAAAAAAAAA	AAAAAAAAAA	A
028002				eAA	AAAAAAAAAA	AABAAAAAAA	AAAAAAADEE	EAAAAEAAAA	AAAAE		
028010				fPFCC	CCCFCCCCCC	CCCCFCCCCC	CCCCCCCCCC	CCCCBAAAAA	AAAAAAA		
028085				fPFCC	CCCFCCCCCC	CCCCFCCCCC	CCCCCCCCCC	CCCCBAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
Station	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2k
031001				fCF	CCCCCf	fBBBBBB	BBBBBBAAEA	AABAAAAEAB	BAAAAAAABF	CCF AF F	
031002							fCCCCCCCCC	CCCCCCCCCC	CCCCCCBBBB	AEEEBAAAAC	A
032001				f	eBBABAAAAA	ABAAAAAAAB	BAAABAABCC	BBBBBBCCBB	BAAAAAAAEE	E EA	
032002				eA	AABABABABA	BABABBAAAB	AABBAAAAAA	BAAAAAAAAA	AAAAAAAAAA	AEAAEAAAE	E
032003				eA	ABBAABAAAB	AAAAABABAB	BBAABEAAAA	AAAAAAAADA	ABAAAAAAEA	AAEBAAAAEA	A
032004					eAABAAA	AAAAAAAAAB	BBBAEEAAAB	AAAAAAEAAA	AAAAAAABAA	AAAAABAAAA	A
032006				e	BAAABAABAA	ABAAAABBBB	BBBBAAAAAb	CCCCCCCCCC	CCCCCCBBBA	AAAAAEACBA	A
032007				e	AAAAABAABA	ABAABABAAA	BBAAAABAAb	CCCCCCCCCC	BCCCCCCBBE	EBBAAAACCD	A
032008					eAAAB	ABAAABABAA	BBBBBAEABA	AAAAAAAAAA	BAAAAAAAAA	AAEEAAAAAA	A
033001				fcCC	ECCCCCCCCC	FFCCCCCCCC	CCF				
033002				cCCcCBB	BBBBBCCCCC	CCCCCCCCCB	BAAAAAABBB	BAAAAAAABB	BAABAAAAAA	AAAABBAAAC	B
033003				fCCC	CCFCFCCCCC	BAEABBABCC	BAAAAACCAA	BCCCCCCCCC	CCCCCPFF		
033004				fCCC	CCCCCCFFCC	CCCCCBABCC	CCCCCCFCFC	CCCCFCCCCC	CFCCCPFF		
033011					ff	ffffcfcaff	eAAAAAAAEA	BAAAAAAAAA	BAAAAAABBA	AAABAAABAC	C
033013					f	fffecccaff	eAAAAAAAAA	AABAAAAAAA	AAAABABAAA	ABAAAEAAAB	B
033024					f	FFCCCCFCCC	CCCeAAAAAA	ABAAAAAAAA	AAAAAAAAAA	ABAABAAAAB	B
033053					f	fffeeeeeee	eCCFCFFBCC	CCCCCCCCCC	CCBAABAA	AACAC	C
035014					fc	cfeffeeeee	eCCCCCCCFF				
036001			CC	FCCCCCCCC	CCCCCCCCC	CCCCCCBAAB	BBBAABAAAB	BBBBABCCCC	CCCCCCCCCC	CCF	
037002				FCCCCBBB	BBBBABABAA	BBBBBBBEBB	BEBBBBBBAA	BAAAAAAAAA	AAAAAAAAAA	AAEEAEBBBB	B
Station	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2k
037003				FCCCCCCC	CCCCCCCCCC	BAAAAABBBA	BBABAAAAAA	AAAAAAAAAA	AAAAABAABA	AAEAAAABBB	B
037004				fceeeeee	ceeeeeeeee	baaaabbabb	bBAABABBE				
038001	ceefeeeeee	ceeeeeeeee	ceeeeeeeee	ceeeeeeCCC	CCCCCCCCCC	CCCCCCCCCC	CCCCCAAAAA	AAAAAAF EA	AAAAAAAAAA	AAAAAAAAAA	A
038005							EAAAABDBAA	AAAAAAAAAE	EE		
038013							eAABBBAAAA	AAAAAABAAA	AAAAABAAAA	BAAAAAAAAA	A
039001	ccccccccce	ccccccccce	ccccccccce	ccccccccce	ccccccccce	ccccccccce	ccccccccce	ccccCBAAAA	BBAAAAAAAA	AAAAAAAAAA	A
039002				fC	CCCCCCCCCC	CCCCCCCCCC	CCCCCCCCCC	CCCCCCCCCC	CCCCCCCCCC	CCBAAAAAAB	B
039004				eEEA	AAE EEEE	EAAAAA	AAAAEAEEEE	EEAEEAF E	EEEEEAAAAA	AEAAAAAAAA	A
039005				eAAE		EEAAAA	EEAEEEEEEE	EEEAEEEEEA	AEEBBAAAAA	AAAAAAAAAA	A
039013				eAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAEA	AAAAAAAAAA	EEAAAAADAA	A
039015			ccc	ccccccccce	ccccccccce	ccccccccce	cCCBAAAAAA	AAAAAAABCB	AAAAAAAAAA	AAAAAAAAAA	A
039076					fffffffff	fffffffff	fFFFFFF	FFCC	CCCFCCCCCC	CFFFEDAAAE	A
039085				eaea	aae	eaAAAA	e				
041016				F	fFFFFFFFFF	FFFFFFFFFF	FFFFFFFEAA	AAAAAAAAAD	AAAAAAAAAA	AAAAAAAAAD	A
053003				f	fcebbbbc b	beabAAAAAA	AAAAAAAAAE				
054001			FCCCCCCCC	CCCCCCCCCC	CCCCCCFCCC	CCCCCCCCCC	CCCCCCCCCC	CCAAAABAAA	AAAAAAAAAA	AAAAAAAAAA	A
054002				fbAA	AAAAAAAABC	CCCCBAAAAA	AAAAAAAAAA	BCBAABABAA	AAAAAAAAAA	AAAAAAAAAA	A
054003			ccccccefcc	cccfcccbAA	EAAAAAAAAA	AAAAAABAAA	AABBBAAAAA	BCCCCCCAAE	AAAAAAAAAA	AAAAAAAAAA	
055002				eEEAA	AAAAAAAAAA	AAAAAABAAA	AAAEAAAAAA	CCCBAAAAAA	AAACCCAAAA	AAAAAAAADA	A
055003				e	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAABAAAAA	AEF EE	DAAAAAAAAA	A
Station	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2k
055004				eAA	AAAAAAAAAA	AAAAAAAAAA	AAAEAAAAAA	AAAAAAAAAA	EBF		
055005				eBA	AAAAAAAAAA	AAAAAAAAAA	AAAEAAAAAA				
055006	cc	ccccccccce	ccccccccce	ccccCBAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAABCC	cCCFC		
055007				eAA	AAAAAAAAAA	AAAAAAAAAA	AAAEAAAAAA	CCCCCCCCCC	CAACCCAABB	BAAAAAAAAA	A
055009					eA	AAAAAAAAAA	AAAEAAAAAA	AAE			
055023				fBAA	AABAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	CCCCCCCCCC	CAAAAAAAAA	AAAAAAAAAA	A
055026				eBA	AAAAAAAAAA	AAAAAAAAAA	AAAEAAAAAA	AAAAAAAAAA	AAAAAAAAAB	BBBAAAAAAA	A
055029					eA	AAAAAAAAAA	AAAEAAAAAA	AAAAAAAAAA	BAAAAAAAAA	AAAAAAAAAA	A
055030			fccc	ccccccccfc	ccccccccce	c					
055032	cc	ccccccccce	ccccccccce	ccccCBAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAABCC	CAAABAAABB	EBDAAAAAAA	A
057001				eeEB	e	eaAABAAA	ABBBBBAAEA	AAAB			
057002				eaaaaaaAA	AAAAAEAAAA	AADDAABAAA	AAAAAAAAAA	ABAA			
067002				ccccchAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A			
067003			eAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAABBAAAAA	AABAABCAAA	AAACCAAAAA	ABBCBBF	
067015				eAA	BAAAAAAAAA	AAAAAAAAAA	AAAAAAAABA	AAAAAAAAAA	AAAAAAAAAA	ABAAAAAAAA	A
068001				eAB	AABCBBABBB	BAAAAAAAAA	AAAAAAAEAE	AAAAAEABAA	AAAAAAAAAA	AAAAAAAAAA	A
068002					e	AAAAAAAAAA	AAAAAAAEAA	AAAAAAE			
068003					e	AAAAAAAAAA	AAAAAAAEAA	AAAAAEBAAA	AAAAAAAAAA	AAAAAAAAAA	D
069001				ebabBB	BBBBBBBBBB	AAAAAAAABA	BAAAAAABEA	AAABABAAA			
069002					e	AAAAAAAAAA	AAAAAAAEAA	AAEEAEAAAA	AAAAAAAAAA	AAADAAAAAD	D
Station	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2k
069003				eE	E	AAAAAAAAAA	AAAAAAAEAA	AAAEAAAAAA	AAAAAAAAAA	AE EAAAE	A
069004					fBBBB	BBBBBBBBAA	AAAAAAAAE	BBCCCCCCCC	CC		
069039					e	EAAEEDAAAe		AEA			
071002				ee			EaAAAAA	AAAbE eAAB	BAEEAAAAAA	AAAAAAAADE	E
073010				C	CCCCCCCCCC	CCCCBCCCCC	CCCCeCCCCC	CBBBCCAAAA	AAAAAAAAAA	AAAAAAAAAA	A
075001				EAE	EAAAA	AAAAAAAAAA	AAABAAAAEE	E AAAAAAA	AAAAAAAAAA	AAAAAAAAAE	A
084001					eE	EEEBBBBEEB	ABAAAAAAAA	AAAAAAAAAA	AAAAAAAAAB	AAAAABAAAA	A

Flow records commencing between 1950 and 1969

Station	1950	1960	1970	1980	1990	2k
003001	eAAAe					
003005				EAAAAAAAA	AAAAAAAAA	A
004004				EAAAAAAAA	AAAAAAAAA	A
005001	eAAAAAA	AAE				
005002				EAAA	AAAAAAAAA	C
005003				EA	AAAAAAAAA	A
005004					EAAAAAAAA	A
006006	eAAAAAB	BAe				
006007			AAAAAAA	AAAAAAAAA	AAAAAAAAA	A
007001		eAAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
007002	eA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
007003		eAAAAAA	AAABAAAAAA	AAAAAADDAA	AAAAAAAAA	A
008002	eAAABAAAA	AAAAAAAAA	AAABAAAAAA	AAAAAAAAA	AAAAAAAAA	A
008003	eAAAAAAAA	AAAAAAAAA	AAAA			
008004	EAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAEAAAAA	AAAAAAAAA	A
008005	eBAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAACA	AAAAAAAAA	A
008006	eAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
008007	eAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAA	E
008008	eAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAA AAEAAA	A
008009	EAEEAEEA	AAAAAAAAA	AAAAAAAAA	AAAACAAAAA	AAAAAAAAA	A

Station	1950	1960	1970	1980	1990	2k
008010	eAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAACAAAAA	AAAAAAAAA	A
008013					EAAAAAAA	
008015					EDDAAADAA	D
008016					EAAE	
008017					DAAE	
009001	e	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
009002		eAAAAAAAA	AAAABAAAAA	AAAAAAA AA	AAAAAAAAA	A
009003		E	AAAAAAAAA	AAAA AAAAA	AAAAAAAAA	A
009006				E	ADAADAAEED	E
009007					EADDAE	
010001		EAAAA	ABAAAAAAAA	ACC		
010002			EAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
011001		E	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
011002		F	CBAAAAAAAA	BAAACAAAAA	AAAAAAAAA	A
011003			EAAAAAA	AAAACAAAAA	AAAAAAAAA	A
011005				D	AAAAE	
012004		F	AAAAAABAAA	BBEFCAAAAA	EEA AAAAA	A
012009	edd	dADEDDADEE		CFFFFCF	BAAAAAAAAA	A
013010				A	AAAAAAAAA	A
013012					AAAAAAAAA	A

Station	1950	1960	1970	1980	1990	2k
013017					AAAAAA	A
014001		EAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
014002		E	AAAAAAAAA	ACCFCAAAAA	AAAAAAAAA	A
014007				AAA	AAAAAAAAA	A
014009					AAAAAAAAA	A
014010					AAAAAAAAA	A
015001	ee	eAAAAAAAE				
015002	e	AAAAAAAEE				
015006	eAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
015007	eAA	AAAAAAAAA	AAAAAAAAA	AACCCAAAAA	AAAAAAAAA	A
015008	EA	AAAAAAAAA	AAADAAAAAA	BACCCAAAAA	AAAAAAAAA	A
015011	cc	cCCCCCCCCC	CCBAAAAAAA	ACCCCAAAAA	AAAAAAAAA	A
015013	ccccc	cCCCCCCCCC	CCCBAAAAAA	AABCCAAAAA	AAAAAAAAA	A
015018	eaaaae					
015029					AAAA	
015030					CAAAAAAAAA	A
015032					CAAAAAA	
015034					AAAAAAAAA	A
015038					AAAAAAA	A
015039					AAAAAAAA	A

Station	1950	1960	1970	1980	1990	2k
015041					AAAAAAA	A
016002	eAAAA	AAAAAAAAA	AAAAAAAA			
016003			EAAABAAAAA	AAAAAAAAA	AAAAAAAAA	A
016007					CAAAAAAAAA	A
017001		E	AAAAAAAAAB	AAAAAAAAA	AAAAAAADAC	C
017002		E	AAAAAAAAA	AAAAAAAAA	AABAAAADAC	C
017016				AAAA	AAFACAAAFC	C
018001	EAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	AACACAAACC	C
018002	b	ABAAAAAAAA	Bbbaaaaaaa	AAAAAAAAA	AACAAAAACC	C
018003	ccc	cCCBAAAAAA	AAEAAAAAAA	AAAAAAAAA	AAABAAAAAC	C
018013				ACCA	AACACAAACC	C
018015				AADA	ABFACCAA C	
018017				EDAAAAAA	BCCAAAA	
018020					ACCACCADCC	F
018021					ACCACCAACC	F
018023				CCC	FCCCABD	
019001	AAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAAC	C
019002		AAAAAAAA	AAACAAAAAA	AAAAAAAAA	ABCBCBAACC	C
019003		eAAAAAAAA	AAAAAAAAA	D		
019004		AAAAAAAAA	AAACAAAAAA	AAAAAAABAA	BACACAAACC	C

Station	1950	1960	1970	1980	1990	2k
019005		eAAAAAAA	AAAAAAAAA	AAAAAAAAA	DACCAAAFCC	C
019006		AAAAAAA	AAAAAAAAA	AAAAAAAAA	AACACAAACC	C
019007		BAAAAAAA	AAAAAAAAA	AAAAAAAAA	AACAAAADCC	F
019008		BAAAAAA	AAAAAAAAA	AAAAAAAAA		
019009		AAAAAAA	AAAAAAAAA	AAAAAA BFA	ADCEFFDEFC	C
019010		A	AAAAAAAAA	AAAABEEBEA	AACACAAACC	C
019011		CCCCCCC	CCCCCCAAAA	AAAAAAAAA	AACACAAAFC	C
019012				EAAA	AAFBCADBCC	C
020001		AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAEAC	C
020002		EAAA	AAAAAAAAA	AAAAAAAAA	AACACAAACC	C
020003		AAAAA	AAAAAAAAA	AAAAAAEAAA	AABACAAACC	B
020004		AAA	AAAAAAAAA	AAAAAEAAAA	AAFE	
020005		CCCCC	CCCCCCAAAA	AAAAAAEAAA	AAFCCAAACC	C
020007			CCCAAAA	AAAAAAAAA	AACACAAACC	C
021001		e AAAAEAAE				
021002		e aBCBAAAAE				
021003		e AAAAAAABAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021004		EAAE				
021005		EABAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021006		DAAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A

Station	1950	1960	1970	1980	1990	2k
021007		EAAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021008		eAAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021009		DAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021010		fF EAAAAAA	AAAAABAAA	A		
021011		DAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021012		DAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021013		DAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021014		EAAAAAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021015		EAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021016		EAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021017		EAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021018		DA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021019		EA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021020		EAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021021		E	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021022		E	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021023			EAAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021024			DAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021025			EAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021026			EAAAAAAA	AAAAAAAAA	AAAAAAAAA	A

Station	1950	1960	1970	1980	1990	2k
021027			EAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021030		EA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
021031	eAAB	AEAAAAAAAA	AAAAAAAAE	E		
021032		eAAA	AAAAAAAEAA	AAAE E	EAAAAAADAA	A
021034		FB	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
022001		FFFBAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
022002	eAA	EAEAAAAAAA	AAAAAAAAA	E		
022003	eAA	BAEAAAAAAA	AAAAAAAAA	E		
022004		eAAA	AAAAAAAAE	E		
022006		eDAA	DAAAAAAAAA	BAABAAAAAA	AAAAAAAAA	A
022007		EA	AAAAAAAAA	AAAAAAAAD	AAAAAAAAA	A
022008		E	AAAAAAABAA	AAAE		
023001	eAAA	AAAAEAAAAA	AAAAAAAAA	AAAAAAAAA	ABEBAAAAAA	A
023002	fCCCCB	AAAAAAAAA	AAABAAAAA	AAAAAAAEA	DAADAAAAAA	A
023003	e	AAAAAAADA	AAAABAAAAA	EADAAAAAEA	AAAAAAAAA	A
023004		eAAAAAAA	AAEAAAABAA	AAABAAAAAB	ABBAABAAAA	A
023005		eAAADAD	AAAAAAAAA	AAAAAAAE		
023006		eAAA	AAAAAAAEEA	AAAAAAAAA	AAAAAAAAAD	A
023007		eAAAAAA	AAAAAAAEA	BAAAAAAEAD	AAAAAAAAA	A
023008		EA	AAAAAAABAA	AEAAAAAEAE	DADAAAAAAA	A

Station	1950	1960	1970	1980	1990	2k
023009		e	AAADDAAAE	EAAE	EEEAAEDDD	D
023010			EAAAAAAAA	E		
023011			EDAAAAABAA	EAAAAAAEEF	DAAAAAAAAA	A
023014		fCCCCCCCCC	CBAEE			
023016				E	DDDAAAADAA	A
023018					AAAAADAA	D
023022				EEAAAADA	AAAAAAAAA	A
023023				D	AAAAAAAAA	A
024001	fCC	CCCCCCBAAA	AAAAAAEAAA	EAAAAAAAAA	EDADAAADAA	A
024002	eA	AAAAAAAAA	AAAABAAAAA	AAAE		
024003	eA	AAAAAAAEAA	AAAAAAAAA	AAAADAAAA	DDAAAAAAAD	A
024004	e	AAAAAAAAA	AAAAAAAAEA	AAAAAAAAA	AAAAABAAA	A
024005	eeEAAA	AAAAAAAEAA	AAAAAAAEEA	AAAAABAADA	AAAAAAAAA	A
024006	fcc	bAAAAAAAAA	AAAAAAAAA	E		
024007		EA	AAAAAAAAA	AAAE		
024011					AAAAAAAA	A
025001	eAAA	AAAAAAADAA	AAAAAAAAA	AAAAAAADAA	AADAAAAAAA	A
025002	ff e	aAAAAAAAAB	BAAAe			
025003	eAA	AAAEAAAAAA	AAAAAAAABA	E	EAAAAAAAA	A
025004	eAAA	AAAAAAAAA	AAAAAAAAAD	AAEADDDADA	AAAAAAA BC	A

Station	1950	1960	1970	1980	1990	2k
025005	e	AAAAAAAAA	AAAABAAEAA	AAAAAAAAA	AAAAAAAAA	A
025006		eAAAAAAAA	AAABAABAAA	AAAAAAAAA	AAAAAAAAA	A
025007		eAAAAAAA	AAAAAAAAA	E		
025008		EAAA	AAAABAAAEA	AEAE F	AAAAAAAAA	A
025009		E	ABAEEAAAAA	AAAAAAAAA	AADAAAAAAA	A
025010		EAA	AEAAE			
025011		E	AAAAAAAAA	AAAE		
025012		E	BAAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
025013		E	EEAEE			
026001	eAAABBB	BBBBBABABB	AEABE			
026002		eAAAEEBBE	EAAAAAAEBE	B CCCCCCCC	CCCCCFC	
026003	e	AAAAAAAAB	AAAAEEEAAA	AAAAAAAAA	AAAAAAAAA	A
026007		FFCCC	FCCCFFCCCC			
026009				FC	CCCCCCC CC	C
027003	eE	EEAAAAAAAA	AAAAABBADD	AAAAAAAAA	AAAAEEAAAA	A
027004		eAAAAAAE	EAAAE			
027006		eAAAA	AAAAAAAAA	AAAAAAAAA	AAAAAAAAA	A
027007	eA	AAAAAAAAA	EBDAAAAAEE	AADAAAAAA	AAAAAAAAA	A
027008	eAAAB	AAAAAAAAA	AAAAAEEEAE	AEDEE		
027009		E	AAABDBAAAD	ADAAAAABAA	AEAACCCCCC	B

Station	1950	1960	1970	1980	1990	2k
027011	fBBBBBB	BBBBBBAAAA	AAABCCF			
027012	eAAAAA	AAAAAAAAA	AAAE			
027013	eBBBBB	BBBBBBAAAA	AAABBBCBEE	B		
027014	eA	AAAAAAAABA	EE			
027015		eAAAAAADA	AAAAAE			
027016	eBBB	BBBBBBAAAA	AEBBEBCEEE	B		
027017	eBBB	BBBBBBAAAA	AEBBBBCEBE	E		
027018	eAAB	BBABBBAAAB	BBbbe			
027019	eAAA	AAEBAAAAEE	EAAAe			
027020	eBBB	BBBBBBABAB	BBBBEBCEEE	B		
027021	e	aEEAAAAAAA	AAAAAAE DA	AAAAAAAAAA	AAAAAAAAAA	A
027022		eAAAAAABAA	EE			
027023		eAAAAAAAAA	AAAAAAAAAA	AAAAAAEDAA	AAAAAAAAAA	A
027024		eAAAAAAAA	AAAAAAEAAA	E		
027025		eAAAAAAAA	AAAE AAAA	AAAAAAAAAA	AAAAAAAAAA	A
027026		eAAAAAA	AAAAAAAAAE	AAAAAAAAAA	AAAAAAAAAA	A
027027		eAAAAAAEA	AAAAAE			
027028		AAAAAAAAA	AAAAAAAAEA	AAAAADAAAA	AAAAAAAAAA	A
027029		eAAAAAAAE	EAAAAAAAA	AAEAAAAAAA	AAAAAAAAAA	A
027030		eAAAAAA	AAAAEEBADA	AADAAAAAAA	AAAAAAAAAA	A

Flow records commencing between 1950 and 1969 (contd.)

Station	1950	1960	1970	1980	1990	2k
027031		AAAAAA	AAAAAAFAEA	AAAAAAAAAD	AAAAAAAAAA	A
027032		EEAA	AAAAAEFAAA	AEAAAAAAAA	AAAAAAAAAA	A
027034		eBA	BAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
027035		FC	CCCCCABAAA	EAAAAAAAAA	AAAAAAAAAA	A
027039		eAB	BBAE			
027041			EAAAAAA	AAAAAAAAAA	AAAAAABCAA	A
027068				EAAAAAAAA	DAAAAAAAAA	A
027071	eAAAB	AAAAAAAAAA	AAAAAEBEAE	BAAAAAAAAA	AAAAAABCAA	A
027084				EA	AAAAAAAAA	A
027085				F	CCFCCCCCCC	C
027086				EAAADE	AAAADAAAAA	A
027087				F	CCCCCCCCCC	C
027088					CCCC	C
027089					FCCCCCCCC	C
027090					EAAAAAAA	A
028003	eAAAB	AAAAAAAAAA	AAEAAAAAAA	AAE	EAAAAAA	A
028004	fbAE	EAAEAAAAAA	AAAAAAAAAA	AAE		
028005	fccbA	AAAAAAAAAA	AAAAAAAAAA	AAAAE		
028006	eaA	AAAAE				
028007	eAA	AAAAAAE			EAAAAAAAA	A

Station	1950	1960	1970	1980	1990	2k
028008	eAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
028009	eB	BBBBBBAAAB	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
028011	eE	EEBBBBBAAA	EEAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
028012	e	AAAAADAAAE	AAAAAAAAAA	AAAAAAAAAA	AAAAAAE CC	C
028014		bBAABBC EAA	AAAAAAAD		EAAAAAA	A
028015		edE A	EEE	EADEAAAA	AAAAAAAAAA	A
028016		eAAAA	AAAAAAAAE			
028017		eaaa	aaAEAAEAE			
028018		eAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
028019		eAAD	AAAEAAAAAA	AAAAAAABAB	AAADAAAAAA	A
028020	fCFCFC	BBBBBAAEeE	AAAAAAAAAA	AAE		
028021		EAAEA	EEEEAAAA			
028022		EA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
028023		EAAAA	AaAAAAAE		EAAAAA	A
028024		EDA	DaAAAAAAAA	AEEADEAAAA	AAAAAAAAAA	A
028025		EAAE	AaAAAAAAAA	AAAAE		
028026		EEAA	AaAADAAAAA	AAAAAAAAAA	AADAAAAAAA	A
028027		EAEBA	BAAAAAE	EAAE	EEAAAAAAAA	
028029		EEEE	EeEAAAAEAA	AAAAE		
028030		eEE	AEEAAAAAAA	AAAAE		

Station	1950	1960	1970	1980	1990	2k
028031		ED	AaAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
028032		EAAAA	AAAAAAEAAA	AEAAE	DAAAAAAAAA	A
028033		eaEAE	AaAAAAAAAA	AAE		
028035		EE		EAAE	EEAAAAAAEA	
028036		E	AaAEAE		EAAAAAB	
028038		E	AaAEAAEAAA	AAE		
028039		EAD	AaDADAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
028040		eE	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
028041		EA	AeAAAAAAAA	AAE		
028043		EA	ADAAAAAAAA	AAAAEAAAAA	AAAAAAAAAA	A
028044		E	EaAAAAAAAA	AAAAE EE	EAAAAAAAAA	A
028045		EBAAA	AaAAADAAAA	ABBBF		
028046		e	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
028059		EAAA	AaAAAAAAAA	AAAEE		
028070		FFFFF	EEEEEEAAAA	AAE		
028074			EA	AAEAE	EAAAAAAAA	A
028076				EAAAE AAA	AAAAAAAAA	A
028080	eAE	EAAEAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
029001		eBBAAAAAAB	AAAAAAAAAE	AAAAAAAAAA	AAAAAAAAAD	A
029002		eAAAAABA	AAAAADAAAA	AAAAAAEAAA	AAAAAAAADD	A

Station	1950	1960	1970	1980	1990	2k
029003		EA	AAAAAAAAAA	AAAAAAAAAA	AAADAAAAAA	A
029004		EA	AAAAAAAAAA	AAAAAAAAAE	AAAAAAAAAP	
030001	E	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
030002		eAAAAAAAAA	AAAAAAAAE	EEEEAEAA	EAAAA	A
030003		eAAAAABE	AAAAAAAAAA	AAAAABAAAA	AAAAAAAAAA	A
030004		eEABAAAB	AAAAABAAAE	AAAAAAAAAA	AAAAAAAADA	A
030005		FC	CCCCCCCCCC	CCCCF A	AAAC	A
031004		FCC	CCCCCCCCCC	CCCCCCBBEB	ADBAAACCCA	A
031006		EAA	BABAAAAAAA	AAAAAAAAAA	AEAAAAAAAA	A
031007		EE	BBCCCBCBAA	AAAAAAAAAD	DEEEEEADAA	B
031008		FF	eEEEEEEDEE	AEEEEEEEEE	EEE EAAEA	A
031010		EA	ABAABAAAAA	AAAAAABAAA	AAAAAEAAAA	A
031013		E	EEBBBEEEDA	DEEEEEEEEE	EEEEEEAAAA	A
031016		E	ABAAAADAAA	AAAAAAAAAA	AAAAAEADEB	A
031022			EEEEBBEEEE	EEEEEEEEEE	EEE EADAA	A
032012		FE	EEEEEEEEEE	EEE	AAC	E
033005	cbCCCCCCC	BAAAABBCBB	BCBBBBBBCB	BBBBBBBBBB	BE	
033006	eBCC	BAAAAAABBB	ABAABBABAB	AE FCCF C	CCFFFCCCCC	C
033007	eBCCCCC	CCCCCBBBAB	BAAAAABAAA	AABBAAAAAA	BBEAAAAAAB	B
033008	fc	cBAAABBBF				

Station	1950	1960	1970	1980	1990	2k
033009	eABCC	BAEAAAAABA	BABBAAAAAA	BAAABAAAAE	CFF	
033012		eAAAAAAAEA	BAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
033014		eAAAAAAAAA	ABAAAAAAAA	AAAAAAAAAB	BBEBEEDAAB	B
033015		AAAAAAAA	AAABAAAABB	DAAAAAAAEB	EAEAAAC	C
033016	f	bAAEEEFEAB	BCCCCCCCCC	CCCF		
033018		EAAAAEEA	AAABAAAAAA	BAAABAAABE	AAAEAEAAAA	A
033019		eAAAAAEA	ABBAAAAAAB	AAAAAABAAA	AAAAAEAAAA	A
033020		eAEBBEE	EBBBBAAABC	CCCCCCCCCC	CCCE BAAC	C
033021		eABBBBBB	BBBAAAAAAA	BAABABBAAB	DAAEAEAAAA	A
033022	f	eBEEEBAAAB	AAAAAAAAAA	AAAAAABBBA	BBABAAAAAB	B
033023		eAAAAAEA	AABAAAAAAA	AAAAAABBAB	BA BAAAAAB	B
033025		fEAAAAA	AAEABCF			
033027		eAABE	BBAAAAAAAA	ABBAAAAABB	BAAAAAAAAB	B
033028		EAEE	ABAAAAAAAA	ABAAAABAAE	BABBEEAABC	C
033029		eABEA	ABCAAAABAA	AAAABABAAA	AAAEEAAAAA	A
033030	fcc	cCCF EAAA	AABABAAAAA	E		
033032		EAAAB	AAAAABAAAA	AAAAAAAAAA	AAABBEAAAB	B
033034		EA	AAAAAAAAAA	AAAAAAAAAB	BAABAAABAB	E
033035	fC	CCCCCCCCCC	CCCCCCC		CCFCCFC	F
033037		F	CCCBCBBCCC	BBCCBCBBAB	BABBBAACAC	C

Station	1950	1960	1970	1980	1990	2k
033040		FFFFF	CBAAAAAAAA	AAAABBABAA	BBAAAEACAC	C
033044		FCC	CCCABBAAAA	ABAAAABBBA	BAAAAADCAC	C
033045		FCC	CCCAAAAAAA	BABAAABBAA	BABBAEAAAC	C
033046		FCC	CCCAABAAAA	BAAAABBAAA	AAAAEAAAC	C
033048		F	CCCAAAAAAA	BBBAAAAAAA	BE EACAC	
033050		fFFFFFFCCC	F FCCCCC	BCCBAEAAAB	ABAAAAAAAC	C
033051		fCCCCC	CAAABAAAAA	AAAAAAAAAA	E AAAAAC	C
033052		CCC CCC	CAEEAAAABA	AAABAAAAAC	BAAEAAF	C
033055		FCCCF	FBAA	AAAAAAABBA	ABABAFDAAC	C
033056		CCFFC	CFCFFfCCCB	BAAAAAAAAA	AAADAAC	C
033062		FCF	FC	CCCCBBAAAA	EAEACAC	F
033064				EAAABAAAAA	BBAEBAC	C
034001	e	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	EBBEEBDBBB	B
034002	eAA	AAAAAAAAAA	EAAAAAAAAA	AEBAAAAAAE	EBEEEBABBB	B
034003	e	AAAAAAAAAA	AAAAAAAAAB	AABAAAAABA	BAAEBBAABB	B
034004		eAAAAAAAAA	AAAAAAAAAB	ABAAAAABEC	CCFBEECFCF	C
034005		eAAAAAAAA	AAAAAAAAAB	ABAAAAAEAB	EAAEEFABBB	B
034006		eAAAbAA	AAAAAAAAAA	AAAAAAAAAA	BAAEAADDBB	B
034007		eAAB	AAAAAAAAAA	AAAAAAAABE	EBEEEFAEBB	B
034008		EABA	AAAEEAAAAF	FCFDBBBEEE	FCBEEAA EB	E

Station	1950	1960	1970	1980	1990	2k
034010		EA	AAAAABAAA	EABAAEAAAE	EAEEEEABB	E
034011		EBA	ABAABAABBE	ABAAAAAABA	EEEAEEABBB	B
034012		eAAA	AADABAAAAA	AAAAAAAABA	AAEAAEABBB	B
034014		F	CFCCFCCFFC	CCFFCBCCCC	EC FCCBEBB	
035001		FEE	FFCFE	BEFABABBE	A	
035002		eAAAAA	AAAABAEAAB	AAAAAAABAE	EAEEEEDBBB	B
035003		eAAAAAAAA	ABAAAAAAAA	ABBAAAAAEA	EEEEEAABBB	E
035004		EAAAA	AAAAAAAAAB	ABBAAAAAEE	EAEEEEABBB	B
035008		FfEAAA	AAAAAAAAAA	ABBAAAAAEB	BBAABAAABB	B
035010		e	AAAAAAAAAE	ABBAAAAABB	AAAAAAABBB	B
035013			EAAAAAAAAB	ABAAAAAAEE	EEEEEEABBB	B
036002		eAABAAAABA	AAAAAAAAAA	AAAAAAAAAA	AABEEAACBB	B
036003		fBAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAEAAABBB	B
036004		fBAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAEABBB	B
036005		eBAAAAAA	AAAAAAAAAA	AAABAAAAAA	AABAAAABBB	B
036006		eBBBAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAABB	B
036007		fCCFBDABAA	AAAAAAAAAA	AAAAABAAAA	EAAEAAABBB	E
036008		EAAABBAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAEBABBB	B
036009		EA	AAAAAAAAAA	AAAAAAAAAA	AAAEEEABBB	B
036010		EA	AAAAAAAAAA	AAAAAAAAAA	AAEAEAABBB	B

Station	1950	1960	1970	1980	1990	2k
036011		EA	AAAAAAAAAA	AAAAAAAAAB	ABAAEEABBB	B
036012		EB	AAAAAAAAAA	AAAAAAAAAA	AAAEAAABBB	B
036013			EEEEEEEFF	FFFFFFFFFF	FFF	
037001	eAAAAAAAAB	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
037005	e	AAAABAAAAB	AAAAAAAAAA	AAAAAAAAAA	AAAAEAAAAA	B
037006		eAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAEBB	B
037007		eBAAAA	AAAAAAAAAA	AAAABAAAAA	AAEEEEABBB	B
037008		eAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAABB	B
037009		eABAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAEAAAAEBB	B
037010		eBAAAAAA	AAAAAAAAAA	AAAAAAAAAA	ABAAAAAAEBB	B
037011		eAAAAAA	AAAAAAAAAA	AAAAAAAAAB	AAAAAEABBB	B
037012		eBAAAAA	AAAAAABAAA	AAAABAAAAE	EAAEAEAE B	E
037013		eAAAAAA	AAAAAAAAAA	AAAABAAAAA	AAAAAAAEBB	B
037014		eBAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
037015	F	EEE	EAAAEEEE E	EEAAAAAAAA	AAAAAAAAAA	A
037016		EAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAEABBB	E
037017		E	AAAAAAAAAA	AAAAAAAAAA	AAAAEAABBB	B
037019		EAAAA	AAAAAAAEEA	AAAAAAAAAA	AAAAAAAAAA	E
037020			EAAAAAAAAA	AAAABAAAAA	AAAAAAAEBB	B
037021			EAAAAAAAAA	AAAAAAAEAA	AAAAAEAEE	

Station	1950	1960	1970	1980	1990	2k
037022			EAAAAAAAAB	AAAABBBAAE	AAEEAEAEBB	E
037025		CBAAE	EEEE			
037026		EBAAEBAAA	AAAAAEE			
037027		fEEEAEBAAA	AE			
037028		fEEAAEBAAA	AAAAEEE			
037029		eEAAABCAAA	BAAAEAE			
037030		EEEBBAAB	e			
037034			FEEAAA	AAEDAEAABA	AAAEAEDEB	
037038	eaeee ea	bEEEBABBAB	ABBAE			
038003	eAAAAAAA	AAAAAAAADA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
038006	fCCC	CBAAAAAABA	AAAABAAAAA	EEE		
038007	eaaaaba	bAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
038011	fCC	CCCCCBBBBB	BABBBBBAAA	AAAAE	EAE	
038012			EAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
038014	eAAA	AAAAAAAAAA	AAAAAAAAAA	EAAAAAAAAA	AAAAAAAAAA	A
038015		E	AAAABAAAAA	A e		
038016		f	CCBBBCCCBA	AABCCCCCBA	AAAAAAAAAB	A
038022	ebbaaa	aAAAAAAAAA	ABBBAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
038025	ebbbbb	bAABAAAAAB	AAEFF			
038027				EDDDE	AAAAAAAAAB	A

Station	1950	1960	1970	1980	1990	2k
038031					EBAAAAA	A
039003		eAAEEEEE	eEEAEEEEDA	BAAAAAAAAA	AAAAAAAAAD	A
039006	eAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAB	A
039007	eAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
039008	fCCCCCCCC	CCCCCCCCCC	CCCCCCCCCC	CCCCCCCCCC	CCBAAAAAAB	A
039009	f	CCCCCCCCCC	CCCCCCCCCC	CCF		
039010	eAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AEAAAAAAAA	A
039011	eAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
039012	EAAA	AAAAAAAAAA	AAAAAAAAAA	AAEEEAAEAA	AAAAAAAAAA	D
039014	eAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
039016		eAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
039017		eAAAAAAA	AAAAAAAAAA	ABEAAECEEE	EADAAAAAEE	A
039019		EAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
039020		eAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAB	A
039021		EAAAA	AAAAAAAAAA	AAAAAAAAAA	ABAAAAAAAA	A
039022		eAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAADAAAA	A
039023		eAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
039024	eaaabAAA	AAABAAAAAA	AAAAAAAA			
039025		eAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	E
039026		eAAA	AAAAAAAAAA	AAAAAAAEEA	AAAAAAAAAA	A

Flow records commencing between 1950 and 1969 (contd.)

Station	1950	1960	1970	1980	1990	2k
039027		eA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
039028		EA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
039029		EA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
039031		eAAAAAAA	AAAAAAAAAA	AAAE		
039032		eAAA	AAAAAAAAAA	AAAE		
039033		eAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAB	A
039035		E	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
039036		eA	AAAAAAAAAA	AAAAAEEAAA	AAADAAAEAA	A
039038		eA	AAAAAAAAAA	AAEEBEEDAA	AAAAE	
039043		eEAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAB	A
039051		EAA	AAAAAAAAAA	AAEAAAAAE		
039052	eAA	EDAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
039053		eAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	E
039054		eAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAADAAAA	E
039081		eAAAAAAA	AAAAAAAAEE	AAAAAAAAAA	AABAAAAAAA	A
039084				A	AAAAAAAAAA	A
039100				EEDDEA	BDEDAEE E	
039107				EA	DAAAAAAEEE	E
039108					EAAEBADAAB	E
039109					EABAAAAAAA	E

Station	1950	1960	1970	1980	1990	2k
039110					EAAADAAAA	E
039111					EAAADDAABE	B
039114					FBAAAAAAB	C
039115					EAAAAADAE	
039116					EDAAABAAA	A
039118					EAAAAAAAA	A
039119					EAAAAAADD	A
039120					EAAAAAAAA	E
039122					EDABAAAAAD	B
039124					EBADA	A
039125					EAAAAAB	A
039126					EAAAADA	A
039127					EAEADDA	A
039128					EEADAAAA	D
039130					EAAAAAAA	A
039131					EAAAAAAA	A
039134					EAAAAAE	A
039135					EAAAAAAA	A
039147				F	CCCCCCCCCC	C
040001	EAAAAAA	AAAAABAE				

Station	1950	1960	1970	1980	1990	2k
040002	eAAA	AAAAAAAAEA	BBAAAe			
040003	eAAA	AAAAABEEFF	FFCFCCCCCC	CBBABACCCC	CCAACCBBBB	B
040004		fCCCCFFC	CCCCCFCCCF	CCCCCFCCCC	CFEDCEBAAA	B
040005	eA	AAAAAAAABB	AABEAEAAAE	AAAAADDDAD	AAAAAAAAAA	B
040006	e	AAAAAAABEB	AABEDEAEEE	EEE EED	DAAAAAADAA	E
040007		eAAAAAEEEB	BABAAABBAE	DEAAAAAADA	AAADDABBEB	B
040008		eEAAAABA	AAAABEDAEE	AADAAADDDA	AAAAAAADA	
040009		eABBBAABA	AAAAAABAAA	AAAAAABAAA	AAAAEEBCCB	B
040010		eAAAAAAEA	AAEAEBEDBB	DADAAADDDD	AAAAABBBBB	B
040011		EAABAA	AAAAABABAB	BADDAAAAAA	AAAAAAAAAA	A
040012		eAAAABA	AAAAAAAAAA	AAAAAAAAAD	AADAAAAAAA	A
040013		E	AAAAAAAAAA	AAAAAAAAAA	DAAAAAAAAA	A
040015		E	DDAAAAAAAE	DDEADDEAAA	AAAAAAAAAD	D
040016		E	AAAAAAAAAB	AAAAAAAAAA	DAAAAAAABA	A
040018		E	AAAAAAAAAA	AAAAAAAAAA	EADAAAADBA	A
040027			FFFF	EDDADAADDA	BABBE	
040029				EDDDDE	ADADAABCBA	F
040033			FF	EDEEEDAEFB	AAABABAAAA	A
041001	eAAaaABABA	AAAAaAAAAA	AAAAAAAADA	AAAAAAAAAA	AAADABBAAA	C
041002	eBAAAAAAA	AAAAABAAAD	AAABAAAAAA	ADDDDDDAAA	AADAADAAAA	A

Station	1950	1960	1970	1980	1990	2k
041003	e	AAAAAAABAA	AAAAAAAAAA	DDDDDDDDDA	BBE EBAAAA	A
041004	eAAA	AAAAAAAAAB	BBBBAAAAAE	FCCFCCCCC	CFFFFFFE	
041005		eAAAABAAAB	AAAAAAAAAA	AADDAAAAAA	AAEEEEDAAA	A
041006		eBAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAE	B
041009	F	CCCCCCCCCC	CCCCCCF		D	A
041010		eEAEADDAA	BBEDDDDDDA	DDDADADDAD	AAAABDAAAA	A
041011		EAAA	ABAAAAAAAA	AAADAAAAAA	AAAAAAADAA	A
041012		EAA	AAAAAAAAAA	AAAAADAAAA	AAADEAAAAA	
041013	eAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	DDAEDDDAAA	AAAAADBEDD	
041015		EAA	EAADDDADDD	DDAAAAAAAA	AAAAAAAAAA	A
041017		e	AAEAAAAADA	AAAAAAAAAA	AAAAAEAAAA	E
041018		e	AABAAABAAA	DAAADAAAAB	BAAAAAAAAA	A
041020		e	AABAAAAAAA	AAADAAAAAA	AAAADAAEAA	A
041021		e	EBABAABBED	AABBBABAAB	BAAABBBEAA	
041028		eEEAAB	ABABAAAAAD	DADDDADAAA	AABEDDDAAB	B
041031		FC	CCCBAAADDA	AAAAAADDAD	DABFEE AE	
041033			EAAAAAA	AAAAAAAE D	AAAAABE EE	
041034		EBBB	BBBCBBBBBB	BBEEF		
041037		EBBB	BBBCBBBBBB	BBBEBBBBBC	BBBEEBCCBB	C
042001	fCCCCCCCCC	CCCCCCCCCC	CCCCCBEAAA	AEDAAAAAAA	AEAAAAAAAA	A

Station	1950	1960	1970	1980	1990	2k
042003		fCCCCCCCCC	CCCCCCBAAA	DAAAAAAAAA	AAABAAEBAC	A
042004	fCC	FCCCCCCCCC	CCCCCCCCCC	FCCCCCCCCC	CCCCCCCCCC	B
042005	fCCCC	CCCCCCCCCC	CCCCCFCFFF	FCCCCCEDAB	EADDAEEEED	
042006	fC	CCCCCCCCCC	CCCCCBAAAA	AAAAAAAAAA	AAAADAAAAB	B
042010	fC	CCCCCCCCCC	CCCCCCCCCC	CCCCCCCCCC	CCCCCCCAAA	A
042014			EAAA	AAAAAAAAAB	BAABADAAAA	
042017				EAD	AAAAAAAAAA	A
042024				F	FCADCCCAAD	D
043001		eAAAAE				
043003		fCCCC	CCCCCCCCCC	CCCCCCCCFC	CFCCCCCCCC	
043004		EAEAA	AAAAAEAAAA	BEEEEBEDEB	AAAAAAAAAA	A
043005		EAAAA	AAAAAAAAAA	ABAAAAAABA	AAAAAAAAAB	A
043006		AAAA	AAAAAAAAAA	AAAAAABBBA	AAAAAAAAAA	A
043007			AAAAAAA	AAAAAAABAA	AAAAAAAAAA	A
043008		AAA	AABAAAAAAA	ABBBAABBBA	ABAAAAAAAB	A
043009		eA	AAAAAAAAAA	AAAABAAABA	AAAAAAAAAA	A
043010			EAAAAAABAA	AA	FCBAAAAAAA	A
043012			EAAAAABAA	AAABABAAEB	AAAAAAAAAA	A
043013			EBABBBAAA	AEEE		
043014			EAAAAAAAA	AABABAAEAA	AAAAAAAAAA	A

Station	1950	1960	1970	1980	1990	2k
043015			FFFFFF			
043017			EAAAAAAAA	AAABABBBEA	AAAAAAAAAA	A
044001		FCCCC	CCCCCCCCCC	CCCCCCCCCC	CCFCCCCCCC	
044002		eAAAAAA	AAAAAAAAAA	AABAAAAEAA	AAAAAAAAAA	A
044003		EAAA	AAAAABBAAA	E	EA A	A
044006		E	AAAAABBAAA	AAAABBBBCB	AAAAAAAAAA	A
045001	eAAA	AAAAAAAAAA	AAAAABAAAA	AAAAAAAAAA	AAAAAAAAAA	A
045002		feAAAAAAAB	AAAAAAAAAA	AAAABAAAAA	AAAAAAAAAA	A
045003		eAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
045004		eAAAAA	AAAAAAAAAA	AAAAAAAABA	AAAAAAAAAA	
045005		FbAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
045006		eaAE				
045009		FCCC	CCCCCCCCCC	CAAAAAACCA	AAAAAAAAAA	A
045011		CF	FCCCC	CF	A	
045012		FCFCCC	CCCCCCCCCC	CCCCCCAABB	CAAAADACAA	A
046002	eAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAACA	AAAAAAAAAA	
046003	eA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	
046005		EAAAAA	AAAAAAAAAA	AAAAAAACA	AAAAAAAAAA	A
047001	eAAA	AAAAAABBBB	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
047002	eaaa	aE				

Station	1950	1960	1970	1980	1990	2k
047003	eBE		EEEEAAE	E		
047004		eAAEABA	AAAAAAAAAA	AAAAAAAACA	AAAAAAAAAA	A
047005		eAAAAAA	DEE EA	AF FCCCC	AAAAAAAAAA	A
047006		eAAEAEE	EE EAAAE	AF FF	CAAAAAAAAA	A
047007		eAAABAA	AABBAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
047008		E	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
047009		E	AAAAAAAAAB	AAAAAAAAAA	AAAAAAAAAA	A
047018				A	AAAAAAAAAA	A
047019				A	AAAAABAAAD	D
048001	eAA	AAAAEAAEEE	AAAAAAAAAA	AAAAAAAABA	AAAAAAAAAA	A
048002		FcbAAABBA	AAABABFCCC	FCFCF		
048004		E	AAAAAAAAAB	AAAAAAAAAA	AAAAAAAAAA	A
048005		EA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
048006		EA	AAAAAAAAAA	AABAABAACF		
048007		EA	AAAAAAAAAA	AAAAAAACA	AAAAAAAAAA	A
048010		F	CCBAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
048011		FcbAAABBA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
049001		eAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
049002	EE	EA	AAABAAAAAA	AAAAAAAAAA	AEAAAAAAAA	A
049003		eEB	CBBBBAAADA	AAAAAAAABA	AAAAAAAAAD	A

Station	1950	1960	1970	1980	1990	2k
049004		E	AAAAAAAAAA	AAAAABAAAA	AAAAAAAAAA	A
050001	eA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
050002		f eAAAAAAA	BAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	D
050006		DAAAA	AAAAAAAAAA	AAAAABAAAA	AAAAAAAAAA	A
050008				EA	AAAAAAAAAA	A
050009				EA	AAAAAAAADA	A
050010				EA	AAAAAAAAAA	A
050012		FC	CCCCCCCCCC	CF FCCCA	AAAAADBAAA	A
051001		AAA	AAABAAAAAA	AAAEEAAAAA	AAABAAAAAA	A
051003		FEBB	BBBBAABFEE	E EEAAAAA	AAAAAAAAAA	A
052001	eaaa	aaaaabAAE				
052002	eAAB	BBBBBBAAe	-			
052003		eBAAAAAAA	BBBAAAAAAA	AEAAAAAAAA	AAAAAAAAAA	A
052004		eAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
052005		EAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
052006		eAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
052007		eAAA	AAAAABAAAA	AAAAAAAAAA	AAAAAAAAAA	A
052008		eBBBBBAAE				
052009		AAAAAA	AAAAAAAAAA	ABBAAAEEAAA	AAAAAAAAAA	A
052010		eAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAEA	A

Station	1950	1960	1970	1980	1990	2k
052011		eAAAA	AABAAAAAAA	AAAAAABAAA	AAAAAAAAAA	A
052014		EAA	BAAAEEEEE	EEAAABAAA	AAAAAAAAAA	A
052020		FCCF	FFFFEAAAA			
053001	eAAAAAA	AAAABAAAAA	AAAAAAAAAA	E		
053002	eAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAABAA	D
053004	EA	AAAAAAAAEE	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
053005		EAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AADAAAAAAA	A
053006		eBAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	D
053007		eAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAADAAAAAA	A
053008		AAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
053009		AAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	D
053018		e	AAAAAAAAAA	AAAAAAAAAA	AAAAAAADAA	A
053019		E	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
053020		EA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
054004	fCBAAAAA	AAAAAAAAAA	BEEEBAAAAE	AAAAAAAAAA	AAAAAAAAAA	A
054005	fCBAAAA	AAAAAAAAAA	ABBAAABAAA	AAAAAAAAAA	AAAAAAE CB	B
054006	fBAAAAA	AAAAAAAAAA	BCBAAABBAB	AAAAAAAAAA	AAAAAAEAAA	D
054007	eAA	AAAAAAAAAA	BCEEBBBAAA	AAAAE AAA	AAAAAAEAAA	A
054008	eAAA	AAAAAAAAEB	CCAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
054010	e	AAAAAAAAAA	BCbAAAAADD	AADE		

Station	1950	1960	1970	1980	1990	2k
054011		eAAAAAAAB	CCBABBABAB	AAAAE	EAAAAAAA	A
054012		eAAAAAAAAB	ABAAABBAAA	AAAAAAAAAA	AAAAAAAAAA	A
054013	a	AAAAAAAABA	AABABBBBAAE			
054014		fBAAAAAB	BAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
054015		E	EEEEEEEAAAA	AAAA DAAA	AAAAAEAAAA	A
054016		eAAAAAAAA	BAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
054017		eAAAAAAA	BBAAAAAAAA	AAAA AAAA	AAAAAAAAAA	A
054018		eAAAAAAA	AAAAAAAAEA	AAAAE DAAA	AAAAAAAAAA	A
054019		eAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
054020		eAAAAAB	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
054022	eAEABE	EB	AEAAADAAAA	AAAAAAAAAA	AAAAAAAAAA	A
054023		eA	BBAE BAAA	AAAA DAAA	AAAADEAABA	A
054024		E	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
054025		E	ABAAAAAAAA	AADAAAAAAA	AAAAAAAAAA	A
054026		F	EAAEAAAAA	AAEA		
054027		E	AAAAAAAAAA	AAAADAAAAA	AAAAAAAAAA	A
054028			FBBAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
054043	fcccc	cCCCFCCCCC	F			
054046			FAAAA	AAAAEEAAAE	EAAAAAAAAA	A
054097				EAADA	AADADADAAA	

Flow records commencing between 1950 and 1969 (contd.)

Station	1950	1960	1970	1980	1990	2k
055008	eAAAAEEaA	AAAEAAAEED	AAAABEBAAA	AAAAAAAAAA	DAAAAAAAAA	A
055010	eAAAA	AAAEAAAAAA	AAAAAAAEAA	BFF		
055011	e	AAAAAAAAAA	AAAAAAABAA	DBF		
055012		eAAA	AAAAAAAEEA	AAAAAAAAAA	AAAAAAAAAA	A
055013		eAAA	AAAAAAAAAA	AAAAAAAAAB	AAAAADAAAA	A
055014		eAAA	AAAAAAAAAA	AAAAAAAAAB	AAAAAAAAAA	A
055015		eAAA	AAAAAAAAEE	EBD		
055016		eA	EAEAAAAAAA	AAAAAAAAAB	AAAAADAAAA	A
055017		eA	BAAEEAAAAA	AEF		
055018		eA	AAAAAAAAAB	AAAAAAAAAB	AAAAAAAAEA	A
055021		E	AAAAAAAAAA	AAE FAAABB	AAAAAAAAAA	A
055022		e	AAAABAAAAE	FF		
055025			EAAAAAAAAA	AAAAAAAABB	BBABAABAAA	A
056001	EAA	AAAAAAAAAA	AAABAABAAA	AAAAAAAAAA	AAAAAAAAB	A
056002	eAA	AAAAAAAAAE	AAAAAE EAA	AAAAAABAAA	AAAAAADDAA	A
056003		eAAAAAA	AAAAABAAAA	AACCF		
056004		eAAAA	AAAAAAAAAA	EF		
056005		EAAA	AAAAAAAAAA	AAAAAABAAA	AAAAAAAAE	
056006		eAAAAAA	AAAAAAAAAA	AACCF		
056007		EAE	EAAAAAAAAA	AAAAAAAAAA	AAAAAAAEAA	A

Station	1950	1960	1970	1980	1990	2k
057003		eAAAA	AAA			
057004	eAA	AEEAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAABAA	A
058001		eAAAAAA	AAAAAAAAAA	AAABABEAAA	AAAAAAAAAA	A
058002		FCCF	AAEEB	EAADAAAAAB	AAAAAAAAAA	A
058003		eAAE				
059001	eEA	AAABAAAAAA	AEAEEAAAAA	DAAAAAAAAA	AAAAAAAAAA	A
059002		FFB	AABBBBAAAA	AAAAAAAAAB	BAAAAAAAAA	A
060002		eAAAAAABC	BAAAAAAABB	BAADAAABAA	AAAAAAAAAA	A
060003		EAAAA	ABBAAAAAAA	AAAAAADAAA	AEBABAAAAA	A
060004		E	BEAAAAAAAA	AACC	EADBABAAAA	D
060005		Fe	BAAAAAAAAA	AAAAAAAAAA	AAAAAEAAAA	D
060006		FB	BBBABAAAAA	AAAAAAAAAA	BAAAAAAAAA	A
060007		FA	AAAAAAAAAA	AAAAAAAAEB	EAAADEEAAA	A
060010	eB	AAAAAAAAAA	AAAAAAAAEC	BAAAAAABAA	AAAAAAAAAA	A
061001		eAEAE	BAABCCCCCC	CCCCCCCCCC	BBBBBAAAAA	A
061002		eABAAAABBA	AABADAAAAA	AAAAAFABBA	AAAAAAAAAA	A
061003		E	ABAAAAAAAA	AAAAAAAEEA	EAAAAAAAAA	A
062001	E	AAAAAAAAAA	BAAAAAAAAA	ABAAAAAAAA	AAAAAAAAAA	A
063001		eAAAAAA	AAAAAAABA	BAAAAAAAAE	BAAAAAAAAA	A
063002		eABAA	AAAAAAAABB	AAAAD	EEDAD	D

Station	1950	1960	1970	1980	1990	2k
064001		EAAAAEAA	AE EEAAAA	AAAAAAAAAA	AAAAAAAAAA	A
064002		ABBA	BBAAAAAAAA	AAABAAAAAA	BAAAAAADAB	A
064003		EED	EE E			
064006		fCCCCCCCCC	CBAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
065001		eAABAABAD	AADAAAAAAA	AAAAAAAAAA	BAAAAAAAAA	A
065002		EEE	EEEEE EE			
066001	e	AAAAAAAAAA	AAAAAAACCC	CCBAAAAAAA	AAAAAAABAA	A
066002		eABAAAAAC	BAAAE			
066003		eAE EA	EEEEEE	AAD AAAA	FFFFCF	
066011		eEEEEA	AABAAAAAAA	AAAAAAAAAA	BAAAAAAAAA	A
067001	eAA	AAAAAAAAAA	ABAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
067005	EAAA	AAAAAAAAAA	AAAAAAA		EAAAAAEAA	A
067006		eAAAAAAAAA	BAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
067007		EAAAAE				
067008		EBAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
067009		EE BB	BBBBBBBBAB	BAAAAAAAAA	AAAAAAAAAA	A
067010		EAAA	AAAAAADAAA	A EE EBB	BAAAAAAAAA	A
067011		CCC	CCFFCCCCFF	FF		
067013		EDE	AAAAAAA			
067017		B	AAAAAAAAAA	AAAAAAAAAA	ABBCBBAAAD	A

Station	1950	1960	1970	1980	1990	2k
067018		E	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAABB	A
067020				CCCCCC	CCCCCCCCF	
068004	eAA	AAAAADADAA	AAAAABAAAA	AAAAABAAAD	AAAAAAAAAE	D
068005	eAAAAAA	AAAABAAEAA	AAAAEAEAAA	AAAAAAADAA	AAAAAAAAAD	A
068006	eAAAAAA	AAAAAAAEEA	AAAAAEE	EEAA		
068007		eBAAAAAA	AAAAAEAAED	AAADAAAAAA	AAAAAAAAAA	A
068019					EAAAE	E
069005	eAEAAA	AAAAAAAEAA	AAAEAAEEEA	EAAE	E	D
069006	eAAAA	AAAAAAAAAA	DAAEAEAAAA	AAAAAAAAAA	AAAAAAAAAE	A
069017		E	DE AAAD	AAAAAAAAAA	AAAAAAAAAA	D
069019		E	AAAAAAAAAA	AADE	EAAAAAA	E
069022					DAAA	A
069027		E	EEDE AADA	AAAAAAAAAA	AAAAAAAAAA	A
069033	eaAAee	e	AE			
069040			EADD	DADAAAAAAA	AADAAAAAAA	E
069041			EADAAA	AAAAAAAAAA	AAAADAAADA	A
070001	eBCBBBABA	AAABCBAABB	FBAE			
071001		fCCCBAAAAA	BCBBBAAAAA	BEAAAAAAAA	AAAAAAABC	A
071003	eAA	AAAAAAAAAA	AAAaE			
071004		eBAAAAA	AE AEAAAA	AAAAAAAAAA	AAAAAAAAAA	D

Station	1950	1960	1970	1980	1990	2k
071005		eAAAAAAAAA	AABBE			
071006		FC	CFCCAAAAAA	AAAAAAAAAA	AAAAAAAADA	A
071011		FFFC	CCFEDAAAAA	AAAAAAAAAA	AAAAAAAAAA	D
072001	c	cCCCCCCBCC	CAAAAAB			
072002		eAAAAAA	AAABCCAAAA	AAAAAAAAAA	AAAAAAAAAA	A
072004	C	cCCCCCCCBB	CCCCCCC A	AAAAAAAAAA	AAAAAAAAAA	A
072005		F	CCCCCEBAAE	EAAAAAAAAA	AAAAAAAAAA	A
072008		FFE	EABCCCAAAA	AAAAAAAAAA	AAAAAAAAAE	A
072011		FC F	DAAA	EDAAAAAAAA	AAAAAAAAAA	A

Station	1950	1960	1970	1980	1990	2k
072016		EAE	EAAAAAAA	AAAAAAAAAA	AAAAAAAEEE	A
073002		EAAAADA	BEBCAAAAAA	AAAAAAAAAA	AAAAAAAAAD	A
073005		EB	BBABAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
073008		E	AAE AADAAA	AAAAAAAAAA	AAAAAAAAAA	A
074001		EC	CCBCCCCBAAA	AAAAAAAAAA	AAAAABBAAE	A
074002		eBB	AAAAABAAAA	AAAAAAAAAA	EAAAAAAAAE	A
074006		fCCCFCC	CCFEABAAAA	AAAAAAAAAA	AAAAAAAAAA	A
074008			AAAD	AAAAAAAAAD	AADAAAAAAE	A
075002		fcBCBBBBBA	AAAAAAAAAA	BAAAAAAAAA	AAAAAAAAAA	A
075003		eA	BAABAADAAA	AAAAAAAAAA	AAAAAAAAAA	A
075004		fBA	BBABAABAAA	AAAAAAAAAA	AAAAAAAAAA	A

Station	1950	1960	1970	1980	1990	2k
075006		eA	AAAAAAAAAA	A	EAAE	
075007		e	AAAAAAAAAE	DAAA	AAEEADAADE	A
076001	EABAE	EAABAAAAAA	E E EB	AAAAAAAAAA	AAAAAAAAAE	A
076002	e	aAAAAAAAAA	AAAAABAAAA	AAAAAAAAAA	AAAAAAAAE	
076003		eAAAAAAEA	AAAAAADAAD	EAAAAAAAAA	AAAAAAAAAA	D
076004		eAAAAEAA	AEAEABADAA	AAAAAAAAAA	AAAAAAAAAE	D
076005		eAABBB	AAAABEDAAA	AAAAAAAAAA	AAAAAAAAAA	A
076007		EAA	AAAAABAAAA	DAAAAAAAAA	AAAAAAAAAA	A
076008		eAA	EAAAAEAAAA	AAAAAAAAAA	AAAAAAAAAE	A
076009		eE	BAAAAAAAAA	AAAAAAAAAA	AAAAAAAAEE	
076010			EAAAADDAAA	AAAAAAAAAA	AAAAAAAAAE	A
076011		AAA	AAEEEBAAAA	AEEADDAAAA	DADAAAAAAA	A
077001		eDAEEAE	EEEBAAAAAA	EAAAAAAAAA	AAAAAAAAAA	A
077002		FCCBAAAA	ABBABAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
078001	eA	AE				
078003		EAA	AAAAAAABAA	AAAAAAAAAA	AAAAAAAAAA	A
078004		EBEEAAA	AABAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
079001		EBBEF	FFCCCFCCCC	CF		
079002	eAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
079003	e	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A

Station	1950	1960	1970	1980	1990	2k
079004		FCBAAAA	ABAaaAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
079005		EAAAAAA	AAAAAAAAAA	AAAABAAAAA	AAAAAAAAAA	A
079006		EAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
079007					AAAEAAAA	
080001		EAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
081001		eBBe				
081002		EAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
081003		AAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
082001		EAAAAAA	AAAAAAAAAA	AAAAAAAAAD	DAAAAAAAAA	C
083002		eBAAAaa	AAAAAAAe			
083003			EAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
083013				EBDBEAAA	BABAAAAAAA	A
084002	eA EAEEE	AAEEAEEEFC	AAEEEEE		E	
084003	eBDA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
084004	eAA	AAAAAAAAAB	AABAAAAAAA	AAAAAAAAAD	DAAAABAAAA	A
084005	eA	AAAABAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAABBEAB	A
084006		EAAAAAA	AAAAAAAEAA	AAAE		
084007		eEAAA	AAAAAAABBA	AAAAAABAAB	ADBDEDAAAA	A
084008		eAAA	AAAAAABAAA	AAAAAAAAAA	AAAAABAAAA	A
084009		EBAA	AAAAAAAAAA	AAAE EAA	AAAAAAAAAA	A

Station	1950	1960	1970	1980	1990	2k
084012		EAAAAAA	AAAAAAAAAA	AAAAAAAAAB	AAAAAAAAAA	A
084013		eBBAAAA	AAAAAAAAAA	AAAAAAAAAA	ADAADAAAAA	A
084014		eAAAAA	AAAAAAAAAA	AAAAAAAAAE	AAAAAAAAAA	A
084015		EAAAA	AAAAAAAEAA	AAAAAAAAAA	ADAAAAAAAA	
084016		EEDA	AAAAABBAAA	AAAAAAAAAA	AAAABAAAAA	A
084017		EAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
084018		A	AAAAAAAAAA	AAAAAAAAAA	AABBABAAAA	A
084019		ABAAABA	AAAAAAAAAA	AAAAAAAAAA	AAAAAEAAAA	C
084020		eE	ADAAADAEAE	AAAAAAAAAA	ABAAAADAAA	A
084021		E	AAEFF			
084022		eEEE	EEEAAEAAEA	AAAAAABAAD	ADAAADAAAA	A
084027		EA	EAAEBEEDE	EEEAA	EDDDBDAAAA	A
084031				EAAD	AAAE	
084032				AE	EDEDAAE	
084033					EAAAADAAA	A
084034					EAAAAAAAA	A
084035					EAAAEAAAA	A
084036					EDAAADACA	A
084037				E	AAAADDAABA	A
085001		EAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAADDAAAA	A

Station	1950	1960	1970	1980	1990	2k
085002		EAAAAAA	AAAAAAAAAA	AAAAAEAAAA	AAAAAAAAAA	A
085003			EAAAAEAAEE	AAAAAAAAAD	AAAAAAAAAA	A
086001		EA	AAAAAABBBB	AAAAABAEAD	ADEADDDAAA	C
086002		EE	BBAAABBAAA	AAAAAAAAAE	DAABAAAAE	
089002				EAAAAABAB	EBBBADDBAA	A
089006				EAABEEAAAB	AAAADDAAAD	A
091002				EAAAAAAAAA	AAAAAAAAAA	A
094001			EAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
095002				DAAAA	AAAAAAAAAA	A
097002			AAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
101001		FCFFFcfFF	FCCCFCC		D	
101002		EEeEF	EEEBBEEEEE	EBEABAAAAA	AAABAAEE	
102001				EB	AAAAAAABAA	A
201010				EBABBAAA	ABBAABABAA	B
203010			EABAABBBBA	BAABABBAAB	BBBAABBBAA	B
203040				EBABBBBBBB	ABBBABBBBB	B
205004			FCCCCCBB	EAABAABAAA	AAAAAAAAAA	A
205008			FCCCBA	BABBBBBABB	AEBBABBBBA	A

Flow records commencing after 1969

Station	1970	1980	1990	2k
001001			eAAAA	A
002001	AAAAA	AAAAAAAAAA	AAAAAAAAAA	A
002002			eAAAAAA	A
003002	AAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
003003	eAA	AAAAAAAAAA	AAAAAAAAAA	A
003004	E	AAAAAAAAAA	AAAAAAAAAA	A
004003	AAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
004005	AAAA	AAAAAAAAAA	AAAAAAAAAA	A
004006	E	AAAAAAAAAA	AAAAAAAAAA	A
004007	E	EEAADAAAAA	AAAAAAAAAA	A
004008		EADD	AAAAAAAAAA	A
004009		EADDE		
006008	E	AAAAAAAAAA	AAAAAAAAAA	A
006009		eAAAA	AAAAAAAAAA	A
007004	A	AAAAAAAAAA	AAAAAAAAAA	A
007005	FFF	F AAAAAAA	AAAAAAAAAA	A
007006		EAA	AAAAAAAAAA	A
008011	FF	FEAAAAAAAA	AAAAAAAAAA	A
009004		EAAACAAAAA	AAAAAAAAAA	A
010003		EAAAAAA	AAAAAAAAAA	A

Station	1970	1980	1990	2k
011004		A	AAAAAAAAAA	A
012002	EAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
012003	EAAAA	AAAAAAAAAA	AAAAAAAAAA	A
012005	EDAA	AAAAAAAAAA	AAAAAAAAAA	A
012006	EA	AAAAAAAAAA	AAAAAAAAAA	A
012007		EAAAAAAC	AAAAAAAAAA	A
012008		DACAA	AAAAAAAAAA	A
013001	E	AAAAAAAAAA	AAAAAAAAAA	A
013002	.	CCCAAAAA	AAAAAAAAAA	A
013003	C	CCC		
013004		ACCAA	AAAAAAAAAA	A
013005		ECCCAAAAA	AAAAAAAAAA	A
013007	CCCC	CCCAAAAAAA	AAAAAAAAAA	A
013008		AAAAAAA	AAAAAAAAAA	A
013009		AAAAA	AAAAAAAAAA	A
014005		CAAAAB	AAAAAAAAAA	A
014006		CAA	BA	
015010	cAAAAAAA	ACCCCAAAAA	AAAAAAAAAA	A
015012	BAAAAAA	AACCCACCAA	AAAAAAAAAA	A
015014		ACAAA	AAAAAAAAAA	A

Station	1970	1980	1990	2k
015015		CCAA	AAAAAAAAAA	A
015016	BAAAAB	AACCCAAAAA	AAAAAAAAAA	A
015017	EAAAA	A		
015021		AACCCC	CAAAAAAAA	A
015023		CCAAAAA	AAAAAAAAAA	A
015024		CCCAABAA	AAAAAAAAAA	A
015025		AAAAA	AAAAAAAAAA	A
015027		CAA	AAAAAAAAAA	A
015028		CCAC	AAAAAAAAAA	A
015035			AAAAAAAAD	A
016004	eAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
017003	EAAAAAAAA	AAAAAAAAAA	ACCACAAACC	C
017004	EAAAAAAA	AAAAAAAAAA	AACACAAACC	C
017005	EAAAAAAAB	AAAAAAEAAA	AACACAAACC	C
017008		AA	AACBCADAFC	C
017012		EAAA	AACACAADCC	C
017015		ADA	AACACAADCC	C
017018			CC	C
018005	EAAAAAAAA	AAAAAAAAAA	AAAAAAAAAC	C
018007		AAAA	AE	

Station	1970	1980	1990	2k
018008	eAAAAAA	AAAAAAAAAA	AACACAAACC	C
018010		AAAA	AACAAAAACC	C
018011		FCAAAAAAA	AACAAAAACC	C
018014		ABAA	AACACAAACC	C
018016		AAAA	AACACAEDFF	F
018018		AAAAAAB	BCBAAAA	
018019		AC		
018022			ACCCCCADCF	
019017		AAAA	AACBFDAACC	C
019020		AADA	AACACAAACC	C
019021			CC	C
020006	CCCAAAD	AAAAAAAADA	AACACAADF	
022009	EDAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
023012	EBAAAAAAA	A		
023013	EAAAAAAAA	A		
023017			EAADDAAAA	A
024008	EAAAEAAE	AAEAAAAAAA	AAAAAAAAAA	A
024009	eAA	AAAAAADAAA	AAAAAAAAAA	A
025018	EEAAAAAAA	AEEAAAAAAA	AAAAAAAAAA	A
025019	EAAAAAAAA	AAAAAAAAAA	AAAAAAA	

Station	1970	1980	1990	2k
025020	EAAAEAEA	AAAAAAAABB	BBAAAAAAAA	A
025021	EBAAAAA	AAAAADAAAA	AADAADAAAA	A
025022	EABEEA	A		
025023	EAEEAAEAA	AAEE F	AAADAAAADD	A
026004	EE BEFEBA	AAAAAB		
026005		DAAAAAAAA	AAAAAAAAAA	A
026006		EAADAAAAAB	AAAAAAAAAA	A
026008		AAAA	AAAAAAAAAA	A
027038	EAAAAAAAAA	EAADADAAAA	AAAAAAAAAA	E
027040	EBAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
027042	EAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
027043	EAAAAAA	DAAAAAAAAA	AAAAAAAACA	A
027044	EAAAAA	AAAADAAAAA	AAAAAAAAAA	A
027047	EAAAAAAE	AEADAEDDAA	AAAAAAAAAA	A
027048	EAAAEEAA	AAADDADADA	DDAAAAAAAA	A
027049	eAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
027050	FCCFFFFEAD	ADDABDAAAA	AAAAAAAA	
027051	eAAEAAAE	AADAAAAAAA	AAAAAAAAAA	A
027052	EAAA	AAAAAAAAAA	ADAAAAAAAA	A
027053	EEAAA	AAAAAAAAAA	AAAAAAAAAA	A

Station	1970	1980	1990	2k
027054	FFFAAE	AAAAAAAAAA	AAAAAAAAAA	A
027055	fCCEAE	AADAAAAAAA	AAAAAAAAAA	A
027056	fFCEAE	AAAAAAAAAA	AAAAAAAAAA	A
027057	fFCEAE	AAAAAAAAAA	AAAAADAAAA	D
027058	fCCEAE	AAAAAAAAAA	AAAAAAAAAA	A
027059	EAE	EAAAAAAAAA	AAAAAAAAAA	A
027061	eA	AAAAAAAAAA	AAAAAAAAAA	A
027062	e	DEAAAAAAAA	AAAAAAAAAE	C
027063		EEDEDAADAA	DDAAADADAA	A
027064	E	AAAAADAAAA	AAAADAAAAA	A
027065	E	ADAAAAAAAA	AAAAAAAAAA	A
027066		DAAAAAAAA	AAAAAAAAAA	A
027067		DAAAAAAAA	AAAAAAAAAA	A
027069		EADAAAAAAA	AAAAAAAAAA	A
027070		EDADAAAAA	AAAAAAAAAA	A
027072		EDAAAAAAAA	AAAAAAAAAA	A
027073		EAAAAAAEA	AAAAAAAAAA	A
027074		EDAAAAAA	AAAAAAAAAA	A
027075		EAAAAAA	AAAAAAAAAD	A
027076		EAAAAAA	AAACBBBBAC	A

Station	1970	1980	1990	2k
027077		EAAAAAA	AAAAAAAAAA	A
027079		FC	CCCCCCCCCC	C
027080		EAAAA	AAAAAAAAAA	A
027081		EAAA	AAAAAAAAAA	A
027082		AAA	AAAAAAAAAA	D
027083		FCC	CCCCCF CCC	C
028028	EAAE E	AE		
028037	EA	AAAAE	EAAAE	
028047	EAABAAAAAA	AAEEE DAAA	AAAAAAAAAA	A
028048	EAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
028049	EAAAAAAAAA	AAAAE DAAA	AAAAAAAAAA	A
028050	EEAAAAAEAA	AAAAAAAAAA	AAAAAAAAAA	A
028052	eADAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
028053	EAAA	AAAAE	DAAAAAAAAA	A
028054	eAAAAAAAA	AAAAE		
028055	eAAAEAAAA	AAE	EAAAAAAAAA	A
028056	EAAAAEA	AAAAE AAA	AAAAAAAAAA	A
028058	EAAAAA	AAAAE	EAAAAAA	A
028060	EAAAAAAA	AAAEE EDA	AAAAAAAAAA	A
028061	AAAAA	AAAABCCAAA	AAAAAAAAAA	A

Station	1970	1980	1990	2k
028066	eAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
028067	eAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
028072	EAAAA	AAAAAAAAAD	AAAAAD E	
028073	EEEA	AAAEE		
028075	E	AAE		
028079		EAAAAAAAA	AAAAAAAAAA	A
028081		EAEAAAAA	AAAAAAAAAA	A
028082	EaAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
028083		EAADDE E	AAAAAAAAAA	A
028086	eAAAAAAAA	AAAADDAAAA	AAAAAAAAAA	A
028087		E	AAAE	
028091		EDAAAA	AAAAAAAAAA	A
028093		EAAE	ADAAAAAAAA	D
028102		EDD	AAAABEE	
028103			AA	A
028115			AABA	A
028116			DBA	A
028117			ABA	A
029005	EAAAAAAAA	AAAAAAAAAA	AAAEAAAAAF	A
029009	eAAAAB	AAAAAAAAAA	AAAAAEAAAD	A

Station	1970	1980	1990	2k
030006	EBBBAA	AEEAAAAAAE	BAEAEEAAAE	A
030011	EAAAAAAAA	AAAAAABDAA	AAAAAAAAAA	A
030012	EAAAAAAAAA	DEBABBEEEA	AAAEBEBEEB	A
030013	eAAA	AAAAAAAAAA	AAAAAAAAED	A
030014	eEAABAAA	BAAAAAAAAE	AAAAAAA	A
030015	eAAA	AAAAAAAAAA	AAAAAAADAA	A
030017	eA	AAAAAAAAAA	AAAAAAAAAA	A
030018		EAAAAAA	AAE AAAAD	A
030033			EADDEEEDAA	D
031009	fEEBEEEEEE	EEEEEEEEEE	EEF EAAAA	A
031017	EEBEEBEEEE	EEEEEE		
031020	EEEBBEEFEE	EEEEEE		
031021	eEAEEBBEAA	AEEEEEEEEE	EAEEEEAAAA	A
031023	EBABBBAB	AAAAAAAAAA	AAAAAAAAAA	A
031024	EAABBBBBB	BBAAAAAAAE	E EAAAA	A
031025	eA	EAAAAAABAA	AAAEAAADAA	A
031026	EA	AAAAAAAAAA	AEAAAEAAAA	B
031027		EDDEEEEAE		
031028		fBAEAAAE	AAEAEAAADD	A
032019	FFFEEEEEEE	EEEEEEEEF	A AAB	A

Station	1970	1980	1990	2k
032020	EAAAABABAB	ABAEAE		
032023	FEBEBEEEEE	EE EE		
032029	EAEEEAE			
032031		eEEEEEEE	EAEEEEDCF	
033026	FeCCCCCCCC	CCCCCCCCC	CCCCFCCCFC	
033033	EAAAAAA	AAAAAAABAA	AABEAAABAB	B
033039	EAAADAAA	AABBABABBB	BABBBAACEC	C
033049	AAAAAAA	E		
033054	FCAA	AABAABAAAA	AABBBAAAAB	B
033057	FBAB	AAAAAAABAE	EE ACAF	F
033058	EB	AAAAAAAAAA	F EAEEABAE	B
033061			EACCF	C
033063		EAAABAABAA	ABBABAAAAC	C
033065		fCCCAAAABE	EEEECEC	
033066		eAAABBAAA	BAEBBAAAAC	C
033067		eAAAAAAC	AEAACAC	C
033068		fCBBAAAB	BEAA FC	
034013	EFFCFBEB	AEEEEEEEEE	ABAEE A	
034018	FFCCADDE	AAAAAEAEAB	BAEEEEAEBE	E
034019	EAAABB	AAAAAAAABE	EAEEEEDBBB	E

Station	1970	1980	1990	2k
036015	EAAAAAAA	AAABAAAEAA	AAAEEEABBE	B
037018	EAAAAAAAAA	AAAAABAAAA	AAAAAAAAAA	A
037023	EAAAAAAAA	AAE A	AAAAAAAAAA	D
037024	EAAAAAAAA	AAABBBAEAA	AABAAAAEBB	B
037031	eBAA	AAABAAAE	AABBB	B
037033	eAAAA	AAAAAEEAAA	AAAAAEABBB	B
037039	FEEEBEE	EEEEEEEEEE	EBAEAEAEBB	E
038002		EAAAAAAAAA	AAAAAAAAAA	A
038004	e	AAAAAAAAAA	AAAAAAAAAA	A
038017	eBAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
038018	eAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
038019	eBAE E			
038020	EAAAAAAAA	AAEEAAAAAA	AAAAEAAAAA	A
038021	eAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
038023		AEDAAAAAAA	AAAAAAAAAA	A
038024	EAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
038026	EAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
038028	EBEEEEAA	AAAAAAAAAA	AAAAAAAAAA	A
038029	eA	AAAAABAAAA	AAAAAAAAAA	A
038030	e	AAAAAAAAAA	AAAAAAAAAA	A

Station	1970	1980	1990	2k
038032			EADDAE	
039030	EAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
039034	eAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
039037	EAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
039039			EDA	A
039040	EAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
039042	EAAAAAAA	AAAAAAAAAA	AAAAADAAAA	E
039044	eAAAAAAA	AAAAAAAAAA	AAAABAAAAD	D
039046	eAEEEEA	E EDDDAD	DADDADAAAA	A
039049	EEE E	DAABEAAAAA	AAAAAAAAAA	A
039055	E	EEEAAAAAAA	AAAAE	
039056	EAE	AEAAAAAAAA	AAAAAAAAAA	A
039057	EA	DAAAEAAAAA	AAAAAAAAAA	A
039058	EA	DAEAAAAAAA	AAAAAAAAAA	A
039061	EAAAAAAAA	AECEADDEBB	CEAAAAAAEB	E
039065	EAAAAAE	EBEEBBAABB	CBAAAAAAAA	A
039068	eAAAAE EA	AAAAAAAAAA	AAAAAAAAAA	A
039069	eAE EAAA	AAAAAAAAAA	AAAAAAAAAA	A
039072	E	EDDDEDDEDA	DAADAAAAAA	A
039073	E	AAAAAAAAAA	AAAAAAAAAA	A

Station	1970	1980	1990	2k
039074		AAAAAAAAAA	BAAAAEEAAA	A
039077		EAAAAAAAAA	AAAAAAAAAA	A
039078	EA	AAAAAAAAAE	AAAAAABAAA	A
039079	E	DDEDEDDAAA	AEDAADADBA	E
039086	eAAAA	AAAAAAAAAA	AAAAADAAAA	A
039087	eAAAAA	AAAAAAAAAA	AADAADAAAA	D
039088	eAaAAA	AAAAABAAAA	AAAAAAAAAA	A
039089	EAAAA	AAAAAADAAA	AAAADAAAAA	A
039090	EAAA	AAAAAAAAAA	AAAAAAAAAA	E
039091	EE	AAAAAE		
039092	E	AAEAEAAAAA	EAAAAAAAAA	A
039093	EE	AEEEEAAAAA	AAAAAAAAAE	A
039094	FEA	BAAAEAAAAA	AAAAAAAAAA	A
039095	EA	DAEEAAAAAA	AAAAAAAAAA	A
039096	E	AEEAEAAAAA	AAAAAAAAAA	A
039097		FCCCCCCCCC	CCCCCFCFF	
039098		EDDAAA	DAAADADADA	E
039099		EAAAAAA	AAAAAAAAAA	A
039101		EAAAAAAA	AAAAAAAAAE	E
039102		EDAAAA	AAAAAAAAAA	A

Station	1970	1980	1990	2k
039103		E	AAEDDDAAEA	A
039104		EDE EA	DADAADEEDD	D
039105		E	DAABAAAAAA	A
039106		FFFF	FFFFFFFFFF	F
039112			EBAAADAA	A
039113			EAAAAAAE	
039117			EDDDADADA	E
039121			EADEDDDDD	D
039123			EAAA	B
039129			EAAAAAAE	A
039138			EDADA	A
039139			EDEE	
039140			EAEA	E
039141			EAAB	D
039142			EBAAA	B
039143			EAAAA	A
039144			EAAAA	A
039145			EAAAA	A
039146			EAAA	A
040014	e EEEEDEE	DEDEEABBBB	BDEEDED	

Station	1970	1980	1990	2k
040017	BEAEEBBDE	EEDEE DDAD	AAAAAAAAAA	B
040020	eEBEEDE	EEAE AAD	AAAAAAAAAA	B
040021	EEEAE	DDEDE	EAAAADAEAA	A
040023	DEEA	ADDAEEDDDD	AAAAABDAAA	A
040024	eEEEAA	EF		
041014	eBDAAAAAAA	AAADDAADAA	AABBEEAAAA	A
041019	eAAAAAAAAA	AAADAAAAAA	AABBAAAAAA	A
041022	eAAAAADDDD	AAAAAAAAAA	AAAAAAAAAD	D
041023	fBBCBBBBBB	BBEBEBBEBC	BBBABBCBAB	A
041024	EAAAAABBA	DAAAAADAAA	AAAABEAAAD	A
041025	EBAAADDDA	DAAAADAAAA	AAAAAAAAAD	A
041026	EAAAADAAA	AAADAAADAA	AAAAAAAEEA	
041027	eAAAAADD	EAAAAAAAAA	AAAAAAAAAA	B
041029	EA	ADAAAAAAAA	AAAAAAAAAA	A
041035		EDAAAAA	AAAABAAAAB	A
042007	cCCCCFCCeC	CFCCCCCCCC	CCAACCCA A	
042008	FCCCCBAAAA	AAAAAAAAAA	AAAAAAAAAA	A
042009	fCCCCBAAAA	AAAAAAAAAD	AAAAAAAAAA	
042011	fCCBAAAA	AAAAAAAAAA	AAAAAADDAA	A
042012	EBBBC	CCCCCCCCCC	CCAACCCAAA	

Flow records commencing after 1969 (contd.)

Station	1970	1980	1990	2k
042013		FF EADDD	DDDAE EAAA	D
042015	E	ADAAADAAAA	DDEEDE	
042016	PCFFF	CFCFFEADDD	AEAAAAADAA	A
042018		EAA	AAAAAAAAAA	A
042019	EAD	AAAAAAAAAE	AADAAFA AA	
042020	EAA	ADAAAAAAAA	BADAAAAAAA	
042023		EEEEEAAD	DADAAAAAAA	
042025		EAAADDAAD	AADADDAAAA	
043011	EECCFFF			
043018	eAAAAA	AAABBAABBB	AAAAAAAAAA	A
043019	EAAAAAA	AABAABAABB	AAAAAAAAAA	A
043021	BBBBB	BBBCCCCCFC	FFBADAAADB	A
043022			BAAAAA	
043024			EAAA	
044004	fCCCCCCCC	CCCCCCCCCC	CCFCCCCCCC	
044008	EEAAAA	AD	FAAAAAAA	A
044009	eAAAA	ABAABBABEB	ABAAAAAAAA	D
045008	EAAAAA	ABAAAAAABA	AAAAAAAAAA	A
045010	CCCCCCC			
045013	FC	CCCCCCCCCA	DAABAACD	D

Station	1970	1980	1990	2k
046006	fAAAAAA	AAAAAAAACA	AAAAAAAAAA	A
046007	eAAAAAAA	AF	FCADADACAA	A
046008	EAAAAAAAA	AF	FCDAAAACAA	
047010	EAAAAAAA	AAAABCAABA	AABAAAAAAA	A
047011	EAAAAAAAA	AF		
047013	FDAAAAAA	AAAAAAAACA	AAAAAAAAAA	D
047014	FCCC	CAAABBAACC	CAAAAAAAAA	A
047015		EAAAAAABB	AAAAAADAAA	A
047016	FCCF	FFFFCCCCFC	AAAAAAAAAA	A
047017	FCC	CCCCCCA	AA	
048003	FC	CAABAAAAAA	AAAAAAAAAA	A
048009	EAAAAAAAA	A CC	CCAAAAAAAA	A
050005	FCCCC	CCCCCCAAFA	AAAAAAAAAD	A
050007	FCCCCCC	CCCFCCCFCC	AAAAAAAADA	
050011	EAAAAAA	AE	EAAAAAAAA	A
051002	EAAAADE	EAABA	AAAAADAAAA	A
052015	AAAAAAAAE	EAAAA	ABAAAAAABA	A
052016	EAAAAAAAA	AAAAAAAAAA	AABAAAABAA	A
052017	EEE	EAAAA	AAAAAAAAAA	A
052025			EAAAAABA	E

Station	1970	1980	1990	2k
052026		AADADAA	DDAAAAAADA	D
053013	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
053015	aaaae			
053016	AAAAAAE			
053017	EAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
053022	eAAA	AAAAE		
053023	eAAE	AAAAAAAAAA	AAAAAAAAAA	A
053024	AA	AAAAAAAAAA	AAAAAAABAA	A
053025		AAAAAAAAAA	AAAAAAAAAA	A
053026	AA	AAAAAAAAAA	AAAAAAAAAA	A
053028		AAAAAAAA	AAAAAAAAAA	A
053029		AAAAAA	AAAAAAAAAA	A
054029	FBBAAAAAAA	AAAAAAAAAA	AAAAAAADA	A
054032	FBBAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	C
054034	EAAAAAAAA	AAAADAAAAA	AAAAAAAAAA	A
054036	EAAAAAAA	AAAAE DAAA	AAAAAAAAAA	A
054038	EABAAAA	AAAAEAAAAA	ADEAAAAAAA	A
054040	FABAAAA	AAAAAAAAAA	AAAAAAAAAA	A
054041	FCCCAAAA	AAAAAAAAAA	AAAAAAAAAA	A
054042	EAEABEE			

Station	1970	1980	1990	2k
054044	EAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
054045	AAAAAE			
054047	FBAE			
054048	eAAA	AAAAE AAAA	AAAAAAAAAA	A
054049	E	AAAAAAAAEA	AAAAAAAAAA	A
054050		AAA	AAAAAAAAAA	A
054052	FBDAAAAAAA	AAAABAAAAA	BAAAAAAAAA	A
054053	EABAE			
054054	EAAAE			
054055	EBEAE			
054056	EEEEE			
054057	FCCCBBAAA	AAAAAAAAAA	AAAAAAAAAA	A
054058	EAABBEE			
054059	EAABAEE			
054060	EBAAAAAE	FCFF EAAA	AAAAAAAAAA	A
054061	EBAEBE			
054062	EAEEBEAE	AAAA		
054063	EABABAAE	AAAE	EDAAA	A
054065	EAABEAE			
054066	EBBBAAA	AAAA		

Station	1970	1980	1990	2k
054067	BBBAE			
054069	eaaae			
054070	EABAAA	AAAA		
054080	FED	AAAE		
054081	EBA	AAAAAAAAAA	AAAAAAEAAA	A
054083	EA	AAAA		
054084	EA	AAAA		
054085	E	AAAA		
054087	BAEE	AAEE EAAAA	BAAAADE BA	A
054088	EA	AAAAAAAAAA	AAAAAAABAA	A
054089		EA	AAAAAAEAAB	
054090	EDADDAA	AAAAAAAAAD	DAAAADDAAA	A
054091	AAAA	AAAAADAAAA	AAAAADDAAA	A
054092	EDAAAAA	AAAAAAAAAA	ADAAADDAAA	A
054094		EEEDEDAA	ABAAAAEAAA	A
054095		EEEDAA	AAAAAAEAAA	A
054096			EAAAAAEAAA	A
054098			DA	A
054099			AAA	A
055020			EAAAAAA	A

Station	1970	1980	1990	2k
055027	eAAAAAAE	FF	EDAAAAEDE	
055028	eAAAAAAAB	ABAAABCAAA	AAAAAAAAAD	A
055031	EAAAAAA	AAAAAAAAAA	EAAAAAADEE	A
055033	EDAADAA	AAAAACAAAB	AAAAAAAAAA	A
055034	EDCADAA	DAAAAAAAAE	DAAAAADAAA	A
055035	EADAAAA	AAAAAAAADD	DCAAACAAAE	
055036			AAE	A
056008	EBaAAEE			
056011	EbaAAAAAAA	AAFF		
056012	AAAAAAAEB	AACCF FE	EAAAAAAAAA	A
056013	EAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
056014	E	EEDF EEDE	AAAAAAAAAA	D
056015	BAAAB	AACCCCCCBA	AAAAAAAAAA	A
056018		EBFFFCCCCF		
057005	EAAAAAAAAA	AAAAAAAAAA	AAAAAADADA	A
057006	eAAAAAAAAA	EECCAAAAAA	AAAAAAAAAA	A
057007	EAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
057008	AAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
057009	AAAAA	AAAAAAAABA	AAAAAAAAAA	A
057010	eAAAAA	BAAAAAAAAA	AAAAAAAAAE	A

Station	1970	1980	1990	2k
057011	EAAE	E		
057012	EAAB	E		
057015	eA	ABACCCAAAA	AAAAAAAAAA	A
058005	eAAAAAAAAA	AAADFADBAA	DDAAAAAAAA	A
058006	EAAAAAAAA	EAAAAAAAAB	ADAAAAAAAA	A
058007	eBAAAAAAAA	EAAAAAAAAB	ABAAAAAAAA	A
058008	EAAAAADAA	EDADAAACAA	AEAAAAAAAA	A
058009	EAAAAAAAA	AAADAADAAA	AAAAAAAAAA	A
058010	EAAAA	EEFC	EEDDDAAAA	A
058011	eAAA	AAAAAAAAAB	AAAAAAAAEE	A
058012	CC	FCFCCCCBCE	AAAAAAAAAA	A
060008		FAAADAA	BAAAAAAAAA	A
060009	FCCCCCCCCC	CCCCCCFFFF	EAAAAAAAAA	A
060012	FAABBBAEEA	EE	EAAAAAAAAA	A
060013	EBCCCF			
062002	EBAAAAEAB	EBC		
063003	BBAEADEDAE		E	A
063004		FCCFCC	BAAAAAAAAA	A
064004			EAAAA	A
064010			EAAAAA	A

Station	1970	1980	1990	2k
065004	eEBBAAAAAA	AAAAAAAAAA	BAAAAAAAAA	A
065005	AAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
065006	eAAA	AAAAAAAAAE	EAAAAAAAAA	A
065007	EAAAA	AAAAAAAAAA	AAAAAAAAAA	A
065008		FCAAABAAA	AAABAAAAAA	A
065014			FAAAA	A
065015			EAAAA	A
066004	AAAAAABAAA	AAAA EAAAA	AAAAAAAAAA	A
066005	EAEAAAAAA	AAAAE EA	AAAAAAAAAA	A
066006	EAAAAAA	AAAAAAAAAA	ABAAAAAAAA	A
066012			ECFAE	A
066025			EAAAE	F
067025	AAAA	AAAAAAAAAA	AAAAAAAAAA	A
067026	CCCCCC	CCCCCCC		
067027			EABAAAA	D
067028	EA	EEF	AAAAAAAAAA	A
067029	EAA	EEDEFDD		
067033			DAAAAB	A
068011	AAAAE	EE		
068015	D	AAAAAAAAAA	EDAEAAAAAE	A

Station	1970	1980	1990	2k
068020	E	AAAAAAAAAA	AAAAAAAAAD	A
069007	EAAA	AAAAAAAAAA	AAAAAAAAAA	A
069008	AAAA	AAAADAAAAA	AAAAAAAAAE	A
069012	AAAA	AAAAAAAAAA	AAAAAAAAAA	A
069013	DAAA	AAAADDAAAA	AAAAAAAAAE	A
069015	EAAEAAABA	AAAAAAAAAA	AAAAAAAAAE	A
069020	EAAAA	AAAAAAAAAA	AAAAAAAAAE	A
069023	AAAA	AAAAAAAAAA	AAAAAAAAAE	A
069024	EAAA	AAAAAAAAAA	AAAAAAAAAA	D
069030	DAA	AAADAAAAAA	AAAAAAAAAA	D
069031	E EAAA	AAABDAAAAE	EDAAAAE	D
069032	EAA	AAAAAAEADA	AAAAAAAADE	A
069035	AAAA	AAAAEAADAA	AAAAAAAAE	
069037		CCFB	DDEEEEDADDA	A
069042		EAAAAAEA	AAAAAAAAAA	E
069044			EEAAAAAA	E
070002	EDEDAAA	AAAAAAAAAA	AAAAAAABCF	F
070003	AEE	AAAAAADADA	AAAABBBFCF	F
070004	AAAA	AAAAAAAAAA	AAAAAAAAAE	A
070005	AAAA	ABAAADAAAA	AAAAAAAADA	A

Station	1970	1980	1990	2k
071008	AAAA	AAAAAAAAAA	AAAAAAAAAA	A
071009	E	AAAAAAAAAA	AAAAAAAAAE	A
071010	FCCCCBAAA	AAAAAAAAAA	AAAAAAAAAE	D
071013	EEAE	DAAAAAAADD	AAAAAAAAAE	A
071014	AAAA	EAAAAAAAAA	AAAAAAABCC	C
071015			aaaa	d
072007	EA	AAAAAAAAAA	AAAAAAAAAA	A
072009	DAAA	AAAAAAAAAA	AAAAAAAAAA	A
072014	EDED	AADAAADAAE	AAAAAAAAAA	A
072015	E	EAAAAAAAAA	AAAAAAAAAA	A
073001	FCCCCCF			
073003		AAAAAAAAA	AEEAAAAAAA	
073006	DAAE	EAAE EAAAA	AAAAAAAAAE	A
073009	DDAD	DAAAAAAAAA	AAAAAAAAAA	A
073011	FCCCCCEDEA	EAAAAAAAED	AAAAAAAAAE	A
073013	EE	AAAAAAAAA	AAEAAAAAAE	A
073014	EE	EDAAADAAAD	AAAAAAAAAA	A
073015	AAEE		EAAAAAAAAE	A
074003	eEABAAA	AAAAAAAAAA	AAAAAAAAAA	A
074005	BAAAAA	AAAAAAAAAA	AAAAAAADAA	A

Station	1970	1980	1990	2k
074007	AAAA	AAAAAAAAAA	AAAACAAAAE	A
075005	AAABAAAA	AAAAAAAAAA	AACAAAAAAE	A
075009	eAAABAAAA	ACAAAAAAAA	AAAAAAAAAE	
075010	eAAAAA			
075016	DDDD	AAAAAAAAAD	DAAAAAAAAE	A
075017	ADDA	DAAAAAAAAA	AAAAAAAAAA	A
076014	EAAAABAE	AAABAAAAD	AAAAAAAAAA	A
076015	EAABAAAAAA	AAAAAAAAAA	AAAAAAAAAE	A
077003	DAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A
077004	D	AAAAAAAAAA	AAAAAAAAAA	A
077005	EAEA	E EAAAAAAE	AAAAAAAAAE	
078005	A	AAAAAAAAAA	AAAAAAAAAA	A
078006		EAAAAAA	AAAAAAAAAA	A
080002	dAA	AAAAAAAAAA	AAAAAAAAAA	A
080003		EAAAAAABAA	AAAAAAAAAA	A
080004		DAA AA	AAAAAAAAAA	A
080005		EAA AA	AAAAAAAAAA	A
080006		AAB AA	AAAAAADDAD	D
081004	dAA	AAAAAAAAAA	AAAAAAAAAA	A
081005		EAAAA	AAAAAAA AA	A

Station	1970	1980	1990	2k
081006		EAAA	AAAAAAAAAA	D
081007		EA	AAAAAAAAAA	A
082002	EAAAAA	AAAAAAAAAD	AAAAAAAAAA	A
082003	AAAEEAA	AAAAAAAAAD	AAAAAAAAAA	A
083004	EAAAAAAA	AAAAAAAAAD	AAAAAADAAA	C
083005	EAAAAAAA	AAAAAAAAAA	DAAAAAAAAA	A
083006	EDAB	AAAAAAAAAA	AAAABAAAAA	A
083007	EAA	AAAAAAAAAA	DAAAAAAAAA	A
083008		EAAAAAAEEB	ADBABBAAAD	A
083009	AA	AAAAAAAABA	AAAAAAAAAA	A
083010		AAAAAAAAAA	AAAAAAAABA	A
084023	EAAAAEA	AAAAAAAAAA	AAAAAAAAAA	A
084024	eAAAAAAE	AAEAAAAABA	ADEDAAAAAA	E
084025	AAAAE	AAAAAAAAAA	AAAAAAAAAA	A
084026	EAABAE	AAAAAAAAAA	AAAAAEAAAA	A
084029	EAAAA	AAAAAAAAAE	AAABBEAAAA	A
084030		EAAAAAAAD	ADAAAAAAAA	A
085004	AAAA	AAAE EAAAA	AADAAAAAAA	A
089003	AAA	AAABAAAABE	eBBBEADAAD	A
089004	E	AAAAAEAABA	eABBBAEAAE	A

Station	1970	1980	1990	2k
089005	EA	AAAAAEEAAA	ABABABDAAD	A
089007		EABEEAAAA	AABAABAAAA	A
089008		EEAAEEAEB	AEE	
089009		EEAAEEAAA	AAEE	
090002	EAA	AE		
090003		EDDABAAA	AAAAAAAAAA	A
092001			eAAAA	A
093001	A	AAAAAAAAAA	AAAAAAAAAA	A
095001	EAA	AAAAAAAAAA	AAAAAAAAAA	A
096001	AAAA	AAAAAAAAAA	AAAAAAAAAA	A
096002	eAA	AAAAAAAAAA	AAAAAAAAAA	A
096003		EAAAA	AAAAAAAAAA	C
096004		EAA	AAAAAAAAAA	A
101003	F	EDDDAAA	AAAEAAAEDE	
101004		EAAAAAAA	AAAAAAA AA	
101005		EAAAAAAA	AADDAAABAA	A
101006		EAAAAAAD	DDE E	
101007		EEADAADA	AABBDEE	
106001			EE EA	A
201002	FCCCCBABB	AAAAAABAAA	ABAAAAAAAA	B

Station	1970	1980	1990	2k
201005	FCCBEEBA	BBBBAABABB	BBBAABABAA	A
201006	FBBABBAA	BBABAABAAB	BBBAAAABAA	B
201007	EADBA	BABBABBABA	ABAAABABAB	A
201008	eAAAB	BABABBBBAB	ABAAABAAAB	A
201009		EABBABBAAA	ABBAABABAB	A
202001	ebaab	bA BABBBAA	ABBAAABBAB	
202002	EABA	BABBABBAAA	ABBAABABAB	A
203011	EAAAAAAAAA	E	CCC	
203012	EBAABAABBB	BABBBBBAAA	ABBBABBBAA	A
203017	fCCCCCCCCB	BABBAABABB	BE	
203018	FCCCCBAABA	BABBAABAAA	ABABAABBAB	B
203019	FCCCCCCE	BABBABBAAB	ABBBBBABAA	A
203020	EBBAAABBB	BCEBABBAAA	ABBAAAABAA	A
203021	FCCBAAABA	BABAABBBAA	ABABABAABA	A
203024	EBABABBBA	DAABBABBAB	BBAAABABAB	B
203025	FCCCBBBBA	BABBBABBAA	BBBAABAABA	B
203026	FCFFCCCCC	BABBBABABB	D A	
203027	FCCCCCCC	BAABABBAAA	ABBBAAABAA	A
203028	FCCBAAAB	BABBABBAAA	ABBAABABAB	A
203029	EAAAAAA	AAAAAAAAAA	E	

Station	1970	1980	1990	2k
203033	EABAB	BABBBABBBE	ABABAAAABB	A
203038		BBAA	ABAAAAAABA	A
203039		fbbeaaa	abbaaaaBAB	C
203042		FCBAABAAB	ABAAABABAB	A
203043		fbaa	bbaaabbBAB	A
203046		fbabbab	ababaabBAB	A
203092		EDBBAAB	ABBAAAABAD	B
203093		fCBBAAA	ABBBABAEAB	A
204001	EABAAEDB	BAAABBBAAB	ABBAAAABAA	A
205005	CC	BABABBBAAB	BBABBBBBBB	B
205010	FCFCCC	CCCCBABAAA	BBABE	
205011	f	BABBBBBAAB	BBABBAABBA	A
205015			ebaaaaaaAA	C
205020		FBBBBBA	ABABAABBAB	A
206001	fbBBBA	BBBBDABABB	BBABBBBBBA	B
206002	CCCCCCCC	BAEBBBBAAA	BBBEBBBBBA	B
236005	FCF	FCCCCFCBA	BBBAABABAA	A
236007		FCBBBBBBB	BBBBABBBAA	B

Summary of Archived Data — Naturalised Flows

Flow records commencing before 1950

Station	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	
008001					FE	FFEEEEEEEE	EEEEEEEEEE	FEEEEF			
023015						FFFFFFFF	FEFEFFEEEF				
027001					FF	FEEEF	FEEEEEF	EEEEEEEF F	E		
027005						FEEEE	EEEEEFEEEE	EEEEEEEEEF		AAAAAA	
028001	FEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEAAAA	AAAAACAA			
028002						FEEEE	EEEEEEEEEE	EEEEEBAACC	CC CC		
031001						FEFFEF	FEEEEEF	EEFEEBAACA	ABFEEFFFFE	CF	
032001						FEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	FEEEF		
032002					FF	EEEEEEEEEE	EEEEEF	FEEEEEEEE	EEEEEF		
032004						FEEEEEE	EEEEEEEEEE	EEEEFFEEEF	FEEEEF		
032006					F	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEF			
032007					F	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEF			
032008						FFEEE	EEEEEEEEEE	EEEEEEFEEE	EEEEEF		
033004						FFFEE	EEEEFEEF				
036001				CAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAD	
037002				CAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAD	
037003				CAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AC CAAAAA	AAAAAAC			
037004				DAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAD	
038001	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAC CA	AAAAAAAAAA	AAAAAAAAAA	A
039001	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A

Station	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2k	
039002				CA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAADAC	C	
054003	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEFEE	FAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAACEEEEE	EEEEEE		
055002				FEE	EEEEEEEEEE	EEEEEEEEEE	EEEFFEEEEE	AAAAAAAAAA	AAD			
055006				FEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEF				
055007				FE	EEEEEEEEEE	EEEEEEEEEE	EEEFFEEEFE	AAAAAAAAAA	ADA			
057002				FEE	EEEEEFEEEE	EEEEEFFEF	FEEEEEBAAA	C				
068003					F	EEEEEEEEEE	EEEEF	FE				
069004					FEEEE	EEEEEEEEEE	EEEEEEEEF					

Flow records commencing between 1950 and 1969

Station	1950	1960	1970	1980	1990	2k
007003		FEEEE	EEEEEEEEEE	F EE	E EE	
015006		FEE	F EEEEEEE	EEEEEE		
016001		FEEEEEE	EEEEEEEEEE	EEEEEE		
017001		F	EF E			
017002		F	EF E			
018002		FEEEE	F E			
018003		FEEEEE	EF E			
019001	EEE	EEEEEEEEEE	EEEEEEE			
019002		EEEEEEEE	EEE EEE			
019003		FEEEEEEEE	EEEEEEE			
019004		EEEEEEEEEE	EEE EEE			
019005		FEEEEEEE	EFEEEEE			
019006		EEEEEEE	EEEEEEE			
019007		FEEEEEEE	EEEEEEE			
019008		FEEEEE	EEEEEEE			
019009		EEEEEEE	EEFFEEE			
019010		E	EEEEEEE			
020001		EEEEEEEEE	EEEEEEE			
020002		EE	EEEEEEE			
020003		EEEEE	EEEEEEE			

Station	1950	1960	1970	1980	1990	
020004		EEE	EEEEEEE			
021001	F	EEEEFFEEF				
021002	F	EEEEEEEEF				
021003	F	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021004		FEEF				
021005		FEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021006		EEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021007		EEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021008		EEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021009		EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021010		FEEEEEE	EF FF EE	E		
021011		EEEEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021012		EEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021013		EEEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021014		FEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021015		EEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021016		EE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021017		EEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021018		EEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021019		FE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E

Station	1950	1960	1970	1980	1990	2k
021020		EE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021021		F	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021022		F	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021024		EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021030		E	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
021034		E	EEEEEEEEEE	EEEEEEEEEE	EEEEEEEEEE	E
023001	FEEE	EEEEFBACAA	CC	DDADA	ADDD	
023002		CAAAA	AC			
023003	F	EEEEEBAAAA	AAAC	AADAADA	ADAD	
023007		CAAAA	BCAC			
024001		CA	AC			
024003	FE	EEEEEBACAA	AC CC			
025001	FEEE	EEEEEBAAAA	AC CAAAC	AAAA	AADA	
025004	FEE	EEEEEBAACC	C			
025008		CAAB	BBEF			
026002		FFEEE	EEEEEEEEEE	AAAAAAAAAA	AAAAABA	
027002	FEEEE	EEEEEEEEEE	E			
027003		FEEEEEEE	EF			
027004		FEEEEEEEF				
027006		FEEEE	EF			

Station	1950	1960	1970	1980	1990	2k
027007	FE	EEEEEEEEE	EF			
027009		F	EF		AAAA	
027011	FEEEEEE	EEEEEEEEE	EEEF			
027012	FEEEEE	EEEEEEEEE	EF			
027013	FEEEEE	EEEEEEEEFE	EF			
027015		CAAC				
027016	FEEE	EEEEEEEEFE	EF			
027017	FEEE	EEEEEEEEFE	EFEF			
027018	FEEE	EEEEEEEEE	EEEF			
027019	FEEE	EEFEEEEEFF	FEF			
027020	FFEF	FFEEEEEEFE	FEEF			
027021		FFFEEEFEEE	EF			
027022		FEEEEE	FF			
027023		FEEEEE	EF			
027024		FEEEF				
027025		FEEEEEEEE	EF			
027026		FEEEEEF				
027027		FEEFFEEFE	EEEF			
027028		EEEEEEEEE	EF			
027029		FEEEEFEEF				

Station	1950	1960	1970	1980	1990	
027030		FEEEEE	EF			
027031		EEEEFE	EF			
027032		FFEF				
027039		FEE	EF			
030003		FF				
031007			FF FF FF			
033001	FEEEEEF					
033002		FEEBAAAA	AAAAAAA			
033003	FF FEEEF					
033005	FEEEEEEE	EEEEEEBBAA	AC			
033006	FEEE	EEEEF				
033007	FEEEEEE	EEEFEECCCF	EF			
033011		FEEF				
033035	CA	AAAABAAAAA	AAAAAC			
036002		CAAAAAAAAA	AAAAAC			
036003		CAAAAAAAA	AAAAAAC			
036004		CAAAA	AAAAAAC			
036005		CAAAAAAA	AAAAAAC			
036006		CAAAAAAA	AAAAAAC			
036007		CAAAA	AAAAAAC			

Station	1950	1960	1970	1980	1990
036008		CAAAAAAAAA	AAAAAAC		
036009		CC	AAAAAAC		
036010		CA	AAAAAAC		
036011		CA	AAAAAAC		
036012		CA	AAAAAAC		
037001	CAAAAAAAAA	AAAAAAAAC	CAAC		
037005	C	AAAAAAAAAA	AAAAAAC		
037006		CAAAAAAA	AAAAAAC		
037007		CAAAAA	AAAAAAC		
037008		CAAAA	AAAAAAC		
037009		CAAAAAAA	AAAAAAC		
037010		CAAAAAAA	AAACCAC		
037011		CAAAAAA	AAAAACC		
037012		CAAAAAA	AAAAAAC		
037013		CAAAAAA	AAAAAAC		
037014		CAAAAAA	AAAAAC		
037016		CAAAA	AAAACAC		
037017		C	AAAACAC		
037019		CAAAC	AAAAC		
039008	CAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A

Flow records commencing between 1950 and 1969 (contd.)

Station	1950	1960	1970	1980	1990	2k
039015		PBC				
040001	PEEEEP	PEEPEEP				
040002	PPEP	PPPPPPEEP				
040003	CAAA	AAAAAAAAAA	AAAAAAAA			
040004		PEEEEP				
040005		PEE				
040006		PEP				
040007		PEEEEEPP				
040008		PEE				
040009		PEE				
040010		PEE				
040011		PEEP				
043005		PEEEP	EP			
045003		PEEEEEP				
045004		CA	C			
045005		PEEEPCA	C			
046002		PEEEEEEEP				
046003		CA	C			
047004		PBCEPP				
047005		C				

Station	1950	1960	1970	1980	1990
047015	AAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAA	
048001		PBACCC			
048002		PP C			
048006		CC			
048007		CC			
049003		CCC			
050001	DA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAD	
050002		PEEBBEBA	C		
050006		DAAAA	AAAAAAAAAA	AAAAAAAAD	
052002	PEEE	EEEEEBEEP			
052005		PEEEBEEEE	EEEEEEEP		
052006		PEEEEEE	EEEEEEEP		
052008		PEEEEBEEP			
052014		PEE	PEEEPPPP		
053004	PE	EEEEEEEEPP	PEEEEEEAAA	A	
054001		CAAA	AAAAAAAAAA	AAAAA	
054005	PEEE	EEEEEEAAAC	AA		
054010		CC			
054013		CACA	C AA		
054014		CAA	C AA		

Station	1950	1960	1970	1980	1990
054017		CC			
055023		P	AAAAAAAAAA	AAA	
056001	PEE	EEEEEEEEE	PEEEEEPP		
056002	PEE	EEEEEEEEP	EEEEEP		
056003		PEP			
056004		PEEEE	EEEEEEP		
056006		PEEEEEE	PPEEEEP		
057001	PEEEEEEE	EEEEEEEBC			
057003		CAAAC			
057004	PEE	EPPEEBAAAC			

Station	1950	1960	1970	1980	1990
058001		PEP C	C		
058003		PEEP			
059001	PE	EEEEEBACC			
061002		PEEEEBCC			
062001	P	EEEEEEEP			
064001		PP			
066002		PEEEEEEE	PPE		
066003		PEP PE			
066011		CA	AC		
067001	PEE	EEEEEEEEEA	AAAAAAAAAA	AAAAAAA	

Station	1950	1960	1970	1980	1990
067002	PEEEEEE	EEEEEEPPEP			
067003		PE	EEEE		
067006		PEEEEEEEEP			
067007		PEEEE			
067015		A	AAAAAAAAAA	AAAAAAA	P
067017		E	EE		
068001		PEEEEEPEP	E		
068004		PEEEEEEEP	PE		
068005		PEEEEEPEP	PE		
068006		PEEPPEPPP	E		
070001	PEEEEP	PEEEBAACC	CC		
071001		CC			
071002		PBAAAA	AAAAC		
072001		PEEEEEEE	PPEP		
075001		PEP			
075002		PEEEEP			
076001	PEEEP	PEEEEEEEEE	P		
076003		PEEEEP			
076004		PEEP			
077002		PEE	EP		

Station	1950	1960	1970	1980	1990
079002	P	EEEPPEEEEE	EP		
079003	P	EEEEEEEEE	EEP		
079006		PEE	EP		
081003		PE	PP		
082001		PEEEEEE	EP		
084002		PE	EEPPP		
084003		PEEEE	EEEEP		
084004	PEE	EEEEEEEEE	PPEEP		
084005	PE	EEEEEEEEE	EEEEEP		
084007		PEE	PEEEP		
084008		PEE	PEEEP		
084009		PPP	EEEEP		
084012		PEEEEEE	EEEEP		
084013		PEE	EEEEP		
084014		PEEEEE	EEEEP		
084017		PEE	EEEEP		
084018		P	EEEEP		
084019		PE	EEPPP		
085001		PEEEEEE	EEEEP		
085002		PEE	EEEEP		

Flow records commencing after 1969

Station	1970	1980	1990	2k
006007	EEEEEEP			
008005	P E			
012002	PP	P	E EE	
012004	EEE	E		
012009	DAAAAAAAAA	AAA	EEE	
013007	EEEE	EEEEEE		
014001	P E			
014002	E E			
015003	EEEEEEE	EEEEEE		
015007	EEEEEEE	EEEEEE		
015008	EEEEEEE	EEEEEE		
015010	EEEEEEE	EEEEEE		
015011	EEEEEEE	EEEEEE		
015012	EEEEEEE	EEEEEE		
015013	EEEEEEE	EEEEEE		
015016	EEEEEE	EEEEEE		
015017	P			
015024		EEEE		
016004	EEEEE	E		
017003	E			

Station	1970	1980	1990
017004	E		
017005	E		
018001	E		
018005	E		
018008	E		
019011	E		
020005	E		
020006	E		
020007	E		
021023	EEEEEEEEE	EEEEEEEEE	EEEEEEEEE E
021025	FEEEEEEE	EEEEEEEEE	EEEEEEEEE E
021026	EEEEEE	EEEEEEEEE	EEEEEEEEE E
021027	EEEEEE	EEEEEEEEE	EEEEEEEEE E
023008	CC		
025002	FFFF		
027064		AAAAA	AAAAD
027079		CA	AAAAAAA
027083		CA	AAAAAAA
027085		A	AAAAAAA
027087			E

Station	1970	1980	1990
027088			A
027089			CAAAAA
028012			AA
031006	FEEEEF		
031009	FFFF		
031010	FEEEF		
031013	FFF		
031016	FEEEF		
031017	FFF		
031020	FFFFF		
031021	FFFFF		
031022	FFF		
032003	FEEEEF		
032012	FFFFFF		
032019	FFF		
032020	FEEEFF		
032023	F FFF		
033026	CAAAAC		
036015	CAAAC		
037018	CAAAC		

Station	1970	1980	1990
037020	CAAAAAC		
037021	CAAAAAC		
037022	CAAAAAC		
037023	CAAC		
037024	CAAAAC		
039046	DADDDDA	D DDDDDD	DADDADAABA C
046006	AAAAAA	AAAAAAA	
051002	FEEEF		
056011	FEEEEEFF		
056012	EEEEEF		
067026	AAAAAA	AAAAAAA	
070002	CBCAAAA	AAAAAAAAAB	AAAAAAAEAC
071014	AAAC	CAAAAAAAAA	AAAAAAAAAC
072004		F	
073010		F	
076007		F	
078004	F		
084001	PEEEF		
084006	FEEEF		
084015	FEEEF		

Station	1970	1980	1990
084016	FEEEF		
084020	FEEEF		
084021	FEP		
084022	FF		
084023	FF		
084024	FF		
084027	FF		
085003	FEEEF		
086001	FEEEF		
086002	FEEEF		
097002	EEEEEF		

GROUNDWATER – REGISTER AND STATISTICS

Background

Groundwater is present in the sub-surface almost anywhere in the British Isles. Where rocks are sufficiently permeable for water to flow readily into a well or borehole, the rock is defined as an aquifer. Sedimentary rocks such as sandstones and limestones often form the most productive aquifers, but water is also found in igneous and metamorphic rocks, in smaller quantities.

The most important British aquifers are listed in Table 1. The Chalk, the Upper Greensand, the Lincolnshire Limestone and the Permo-Triassic sandstones have the highest average yields and are the most important from the viewpoint of public supply, with borehole yields that can reach 3000 to 4500 cubic metres per day. Next in importance are the Lower Greensand and the Magnesian Limestone aquifers where yields to individual wells of 1500 to 3000 cubic metres per day can generally be expected. In the other aquifers listed, while occasional sources sufficient for large supplies may be developed, they tend to be important only locally. The outcrop areas of the major aquifers are shown on Figure 1. This map shows how the major aquifers are concentrated in England; aquifers in Wales, Scotland and Northern Ireland are less extensively developed and tend to be only of relatively local importance. In rocks that are not generally recognised as aquifers, water may still be available, but well yields tend to be small (of the order of only a few cubic metres per day), uncertain as a continuous source (tending to fail in prolonged droughts), often with an indifferent water quality, and the sources are vulnerable to pollution in some areas.

The groundwater resources of an aquifer are naturally replenished from rainfall. The normal recharge of an aquifer takes place during the winter months when the cool and damp weather means that potential evapotranspiration is low and soil moisture deficits are negligible; a substantial proportion of the winter rainfall is therefore available to replenish groundwater resources. Groundwater levels rise in response to the infiltration of rainwater through the soils and any rock above the aquifer. During the summer months, when the potential evapotranspiration is high and soil moisture deficits are appreciable, little infiltration takes place. Water levels in the aquifer fall as storage is depleted by flow to rivers (baseflow), flow to springs and by pumped abstractions. During recharge the rate of infiltration is affected by the nature of any deposits through which water must pass to reach the aquifer. Where these deposits have low permeabilities there will be a consequential reduction in recharge rates, and a delay between rainfall events and the time when water levels begin to rise. Where the water level in an aquifer is at a considerable depth below ground level, the aquifer will also take longer to respond to recharge than where the unsaturated zone is thinner.

The extent of fluctuation of water levels in a given aquifer is a reasonable surrogate for the volume of water that is available within the aquifer to support natural river flows and artificial abstractions. The actual magnitude of the fluctuations will be affected not only by the amount of infiltration but also by the value of the specific yield (which is that proportion of the volume of voids in the rock, which may store useable groundwater, expressed as a fraction of the total volume of rock). Where the specific yield is small, the addition of a given volume of water will result in a greater rise in water levels than would be the case where the specific yield is larger, and the capacity for storage greater. To fully understand the relationship between levels and available water resources in a given aquifer requires a detailed knowledge of local geological conditions. In aquifers where the natural drainage of groundwater (appearing as springs, seepage lines or 'risings') is rapid, water levels rise more slowly during recharge periods because large quantities are simultaneously being discharged. Other aquifers may respond more rapidly if fewer natural outlets are available.

The (annual) cyclical pattern of recharge is not, however, constant. Changes in weather patterns – rainfall in particular – can significantly influence soil moisture conditions and infiltration rates, producing conditions that vary both spatially and temporally. It is not uncommon for the amount of recharge, and consequently the water level fluctuations, to vary by a factor of four or more between dry years and wet years. This variability is particularly evident in eastern England where, on average, the margin between annual rainfall totals and annual evaporation losses is small.

Groundwater plays an important role in the overall water resources of the British Isles, constituting about one third of public water supplies. Groundwater supplies are often reliable when surface water supplies are stressed. Only the largest artificial reservoirs in the United Kingdom have sufficient capacity to support demands through the driest summers, assuming that they are full at the start of the summer, without some continuous contributions from river intakes. Prolonged dry spells lead, in many rivers, to reduced flow, particularly where the natural groundwater contribution (baseflow) is limited. By way of contrast, a groundwater drought is caused by a lack of winter rainfall. Potentially, the most serious droughts occur when, as in 1975/76 or 1995/96, a dry summer succeeds a notably dry winter, or as in 1988/92 in eastern England, recharge is significantly below average over a series of successive winters. When recharge is significantly above average high groundwater levels may exacerbate surface water flooding, as in the winter of 2000/01.

TABLE 1 GENERALISED LIST OF AQUIFERS IN THE UNITED KINGDOM

Era	System	Subsystem	Age (10^6yrs)	Aquifer	Importance
CAINOZOIC	Quaternary	Holocene	0.01	Superficial deposits	*
		Pleistocene	1.8	Upper & Middle Pleistocene	*
				Crag	**
	Neogene	Pliocene	5	Coralline Crag	**
		Oligocene	38		
	Paleogene	Eocene	65	Bagshot Beds	**
				Lower London Tertiaries	
				Blackheath & Oldhaven Beds	
				Woolwich & Reading Beds	
				Thanet Beds	**
MESOZOIC	Cretaceous	Upper Cretaceous	100	Chalk	****
				Upper Greensand	***
		Lower Cretaceous		Lower Greensand	***
			145	Hastings Beds	**
	Jurassic	Upper Jurassic		Portland & Purbeck Beds	*
				(with Spilsby Sandstone)	(**)
			160	Corallian	**
		Middle Jurassic	180	Gt and Inferior Oolitic limestones	**
				(with Lincolnshire Limestone)	(****)
		Lower Jurassic		Bridport & Yeovil Sands	**
			210	Marlstone Rock	
PALAEZOIC	Triassic	Upper Triassic	230	Permo-Triassic sandstones	****
		Lower Triassic	245		
	Permian		285	Magnesian Limestone	***
	Carboniferous	Upper Carboniferous		Coal Measures	**
			320	Millstone Grit	**
		Lower Carboniferous	360	Carboniferous Limestone	**
	Devonian		410	Devonian sandstone	*

Key to aquifer importance:
* aquifer of minor importance only
** aquifer producing small, but useful, local supplies
*** aquifer of local importance, often providing local supplies
**** aquifer of major importance

Note: There is no formal system for naming aquifers in the UK and some aquifer names reflect common professional usage, and do not represent the latest lithostratigraphic nomenclature. For more information on geological nomenclature, refer to The British Geological Survey Lexicon of Named Rock Units, which can be accessed via the Survey's website at: http://www.bgs.ac.uk/.

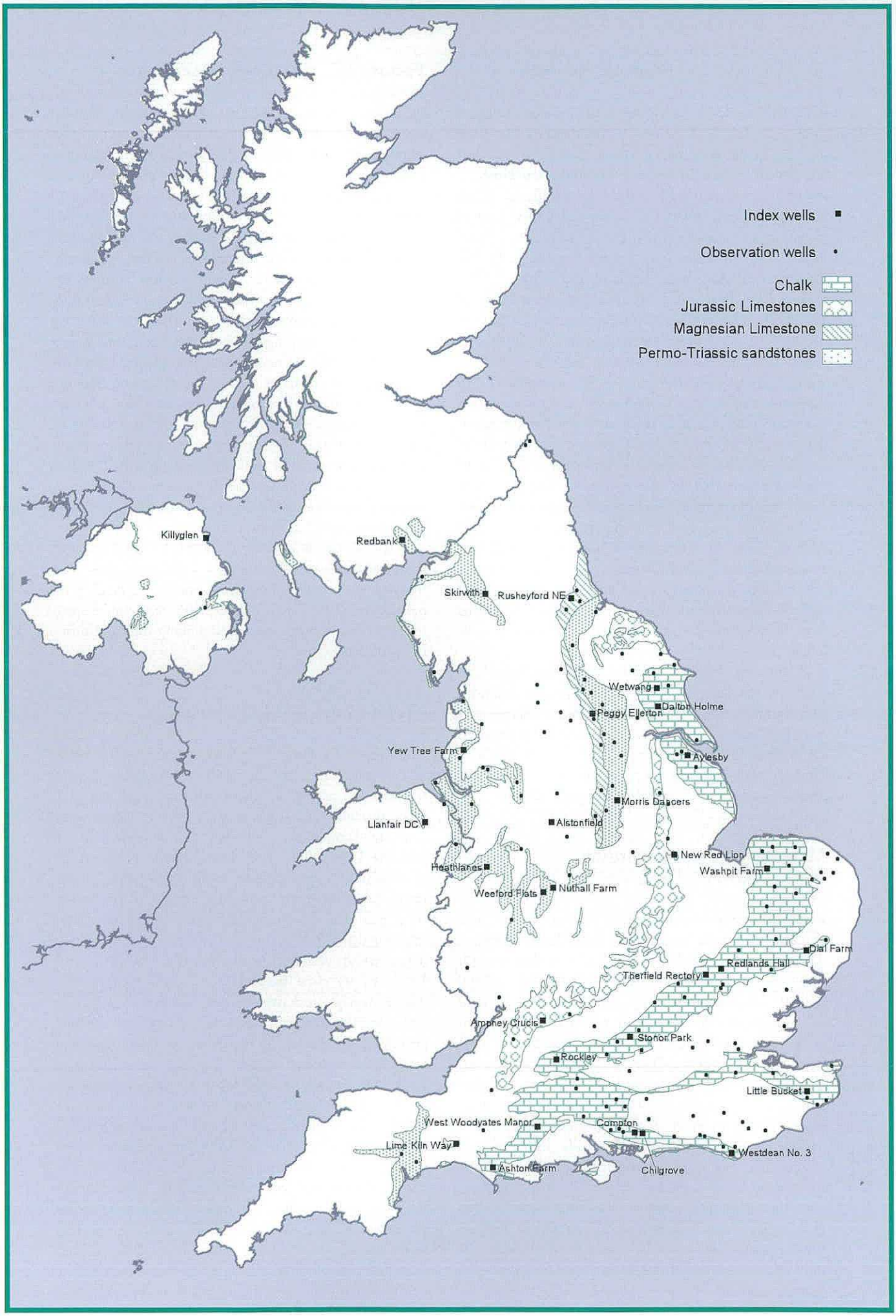


Figure 1 Principal aquifers and observation well locations

The Observation Borehole Network

Groundwater level observation wells (in this context, a well includes both shafts – constructed by hand digging – and boreholes – constructed by machinery) are generally used for one of two purposes: either to monitor levels regionally within an aquifer and thus to estimate groundwater resource fluctuations, or to monitor the effects locally of groundwater abstractions. Monitoring networks are generally operated by the Environment Agency in England and Wales, by the Scottish Environment Protection Agency in Scotland and by the Department of the Environment, Northern Ireland. In total there are approximately 5000 sites where groundwater levels are monitored, with the overwhelming majority of wells concentrated in England and Wales. The wells used within the National Groundwater Level Archive, for periodical assessments of the national groundwater situation, consist of a small subset of approximately 170 of these sites, selected by the British Geological Survey (then the Institute of Geological Sciences) in 1981[1]. The selection was based upon the hydrogeological units identified in an investigation of the groundwater resources of the United Kingdom[2]; one site was chosen for each aquifer present within each unit. For Scotland and Northern Ireland, this was not possible due to the very limited number of potential observation wells available.

Since the 1980s a number of changes have been made to the list of selected wells. At some locations observations could no longer be continued and new sites have been added from time to time. Details of the wells currently in this national network are given in the Well Register and Statistics (pages 184 to 196) and are available on the NRFA website (see page 203).

Measurement and Recording of Groundwater Levels

Many of the observation wells in the national network are equipped with continuous water level recorders. These recorders measure level either by a float or with a pressure transducer. Data are recorded, usually digitally but occasionally on paper charts. Telemetry of groundwater levels is still relatively uncommon; aside from a few monitoring sites used as part of local flood warning schemes, rates of groundwater fluctuation are generally low enough to ensure that instant management response is rarely required. Apart from key wells, the majority of the 5000 observation wells nationally are still measured manually, either weekly or monthly. The usual instrument is an electric probe suspended upon a graduated cable or tape, contact being made by the water to complete a circuit that gives either an audible or visual signal at the surface. Measurements are normally made to the nearest 10 millimetres, although instruments may be capable of greater accuracy.

Factors Affecting Level Observations

In addition to responding to recharge from rainfall, some aquifers exhibit short period fluctuations, and water levels can be affected by changes in atmospheric pressure, or by the tidal cycle if close to the coast.

The national observation well network was selected, wherever possible, to reflect natural fluctuations in water levels in response to climatic events. While aquifers respond to recharge from rainfall they are also influenced by pumping abstractions. There are few aquifers in Britain that have not had their natural regime altered to some extent by pumping. The water level in the area surrounding a pumping borehole is lowered, and some observation wells are so seriously affected by pumping that no useful estimates of the annual natural fluctuations can be made. In some aquifers the effect of long-term groundwater abstraction patterns has been to totally alter natural levels, to the point that groundwater levels are dominated by changes in abstraction. This has led to long-term declines in levels in some aquifers, or, if pumping has diminished or ceased, steady increases in levels from historical lows.

Where the aquifer is confined by impermeable rocks, and the site is located at some distance from the outcrop, the seasonal fluctuation may be so small as to be undetectable. These aquifers also tend to be very sensitive to pumping influences, making their monitoring problematic.

Groundwater Levels 1996–2000

The range of groundwater levels in observation wells and boreholes over the 1996–2000 period was remarkable, across southern Britain especially. A representative set of groundwater level hydrographs is featured on pages 179 and 180. For each index well the 1996–2000 groundwater levels are shown as a continuous trace, together with the average (lighter trace) and extreme monthly levels (the shaded envelopes) for the pre-1996 record. In many areas, the magnitude of the recovery following the severely depressed groundwater levels recorded in 1996 and 1997 has no close parallel in the instrumented era. Above average recharge in the winters of 1997/98 and 1998/99 set the scene for exceptional hydrogeological conditions in many UK aquifers over the 2000/2001 recharge season. The September 2000 – April 2001 period was the wettest 8-month sequence on record for England and Wales (in a series from 1766). This resulted in record high groundwater levels in many aquifers. By late 2000 groundwater levels exceeded previous maxima throughout most of the Chalk aquifer, and generally were still rising. In the slower-responding Permo-Triassic sandstones, levels continued to rise well into 2001 and, commonly, levels in the early spring were substantially higher than any previously recorded. The groundwater statistics presented in this volume relate to the preceding

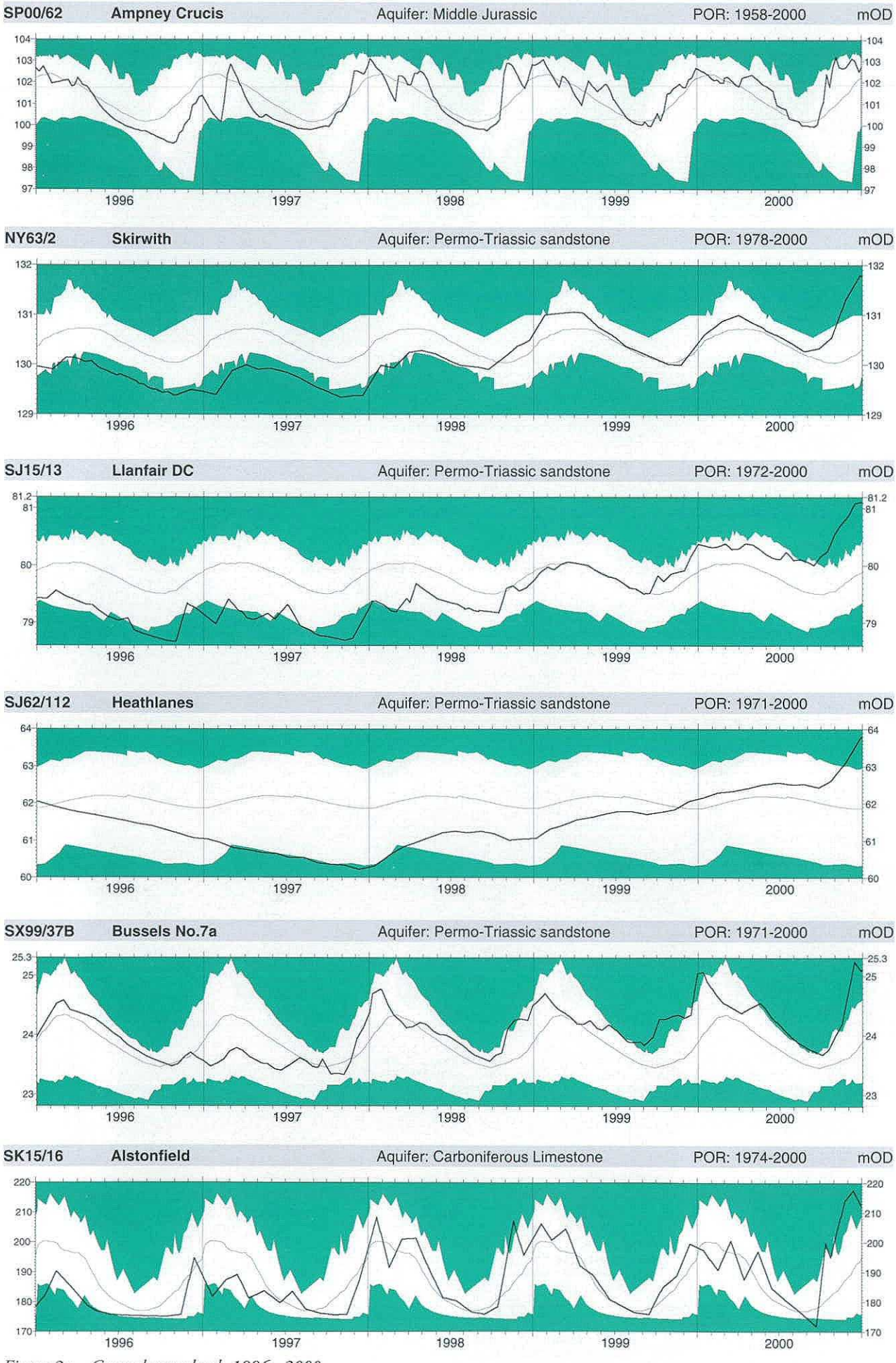


Figure 2a Groundwater levels 1996–2000

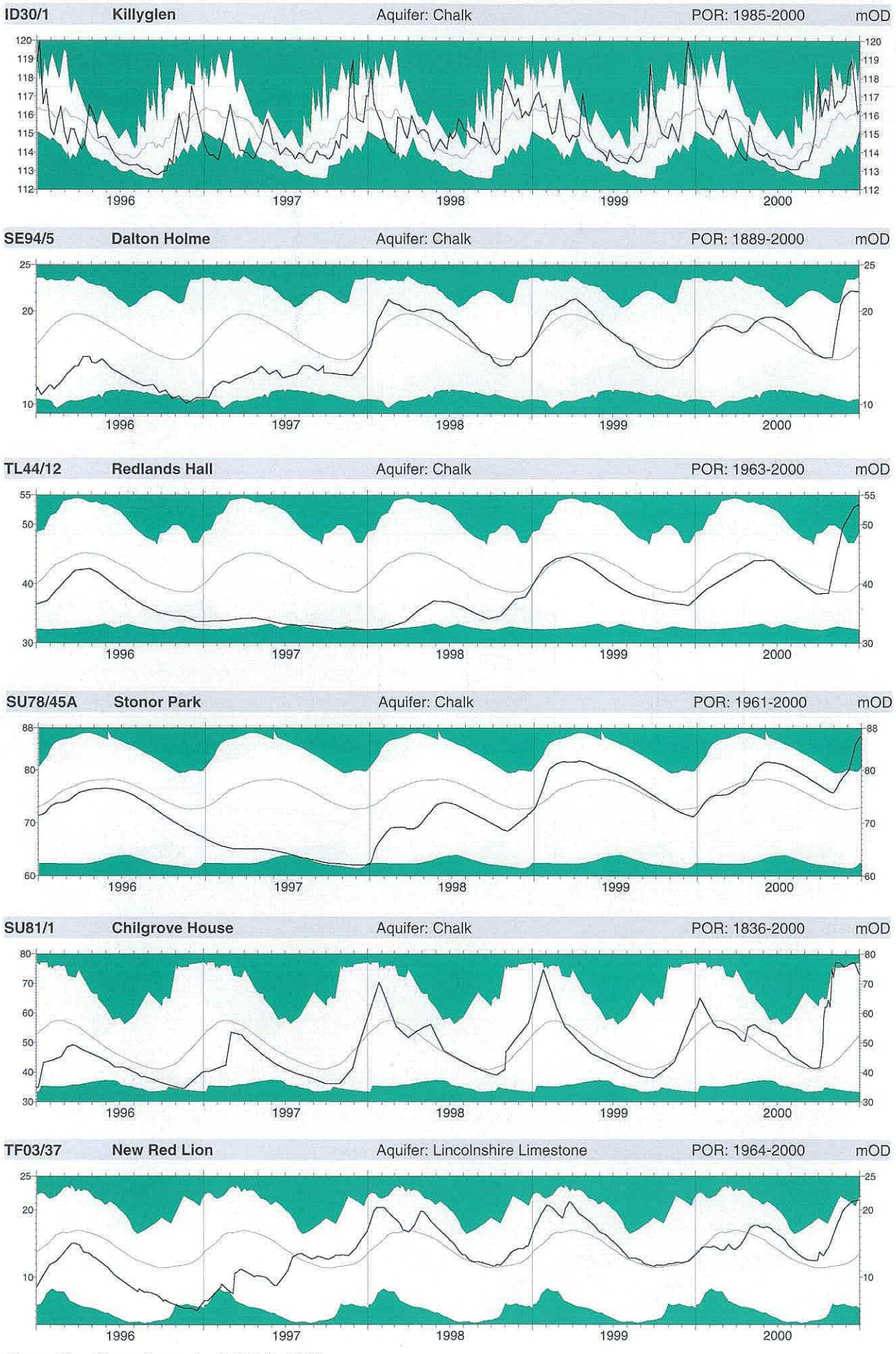


Figure 2b Groundwater levels 1996–2000

recharge season but the start of the exceptional conditions can be seen in the hydrographs at the end of 2000. For further details of the impact of the 2000/01 recharge on groundwater levels see: http://www.nwl.ac.uk/ih/nrfa/water_watch/index.htm

Scope of the Register and the Statistical Tabulations

The groundwater data are presented in two parts. The first (the Well Register and Statistics table) provides a register of reference details relating to the individual wells alongside a statistical summary of fluctuations over the featured period. In the second part (Table 2) these data are used to assess recharge and groundwater resource changes for the major aquifers in the United Kingdom over the period 1996–2000.

The sites listed in the borehole Register were selected so as to give a reasonably representative cover for aquifers throughout England and Wales; three sites are featured for Northern Ireland and one for Scotland. The wells are grouped according to the aquifer to which the water level variations in the wells are attributed. A generalised list of aquifers (Table 1) provides the conventional names of the major UK aquifers; the aquifers are tabulated in stratigraphical order but the local names for individual strata are mostly omitted, and the intervening aquicludes are not shown. The location of the wells featured in the Register, and the outcrop areas of the main aquifers, are shown in Figure 1.

WELL REGISTER AND STATISTICS

The following explanatory notes will assist in the interpretation of particular items in the tabular material.

Well Number

The well numbering system is based upon the National Grid. Each 100 kilometre square is designated by prefix characters, e.g. SE, and is divided into 100 squares of 10 kilometre sides designated by numbers 00 (in the south-west corner) to 99 (in the north-east corner). Thus, the site SE94/5 is the fifth well or borehole recorded in the National Well Record Archive within the 10 kilometre square SE94. A suffix such as A, B, etc., defines the particular well when there are several at the same site. This numbering scheme is used by the BGS for all identified water wells and boreholes. For Northern Ireland, which is on the Irish Grid, the first of the prefix characters is always 'I'.

A complete set of prefix letters for the UK is shown in Frontispiece I.

Name

The name by which the well is normally referenced. All the monitoring sites featured in the Register are shown on Figure 1.

Hydrometric Area – H.A.

The Hydrometric Area is either an integral river catchment having one or more outlets to the sea or tidal estuary, or, for convenience, it may include several contiguous river catchments having topographical similarity with separate tidal outlets – see page 4.

Grid Reference – NGR

The eight-figure references given in the Register relate to the 100 kilometre National (or Irish) Grid square designated by the two-letter code appearing as the prefix characters in the Well Number.

Measuring Authority – M.A.

The measuring authority refers to the body that is responsible for taking groundwater level readings at the particular site. In England Wales this is normally the appropriate regional office of the Environment Agency. A full list of codes, together with the corresponding names and addresses appears in the Directory of Measuring Authorities (page 201).

EEC Unit

Sub divisions of the principal aquifers as defined in a major study of the ground water resources of the UK[1]. These units are used in the areal assessment of recharge (see below).

Level

The altitude of the point from which measurements are taken at a particular site, given in metres above Ordnance Datum.

Comment

A short commentary relating to important characteristics of the well and its associated record of groundwater levels; particular reference may be made to the effect of local or regional pumping on the water levels at the observation site. Levels at a representative selection of sites are updated at relatively frequent intervals, usually monthly. Such sites are used when an immediate assessment of the national groundwater

situation is required; wells and boreholes used for this purpose are designated as *index wells.*

Period

The first and last years of data on the National Groundwater Level Archive used in the analysis for this current volume. For various reasons, the full period of record may not be used in all analyses.

Mean Annual Range

The increase in the level measured in a well over a given period will be approximately proportional to the recharge over that period. By monitoring levels over a recharge season, defined as the end of the summer recession of groundwater levels and the beginning of the summer recession of the following year, an estimate of annual recharge (proportional to previous years) can be arrived at. This method was first introduced in the Hydrometric Register and Statistics 1981–85 volume. It is most suited to circumstances when a single peak is readily identifiable in each recharge season.

Calculations are made for a standard recharge season, defined as the first day of August to the last day of the following July. The water level at each site is estimated, by extrapolation where necessary, for the last day of each month. The use of end-of-month levels was dictated to a large extent by the existence of end-of-month data only for the longest pre-1990 records. However, where some sites are measured at close time intervals (weekly or daily), the summed cumulative rises give a significantly larger total than the rise determined by end-of-month levels alone. To compare sites with differing intervals between measurements, it is thus necessary to use a common base.

The next stage of the calculation sums the monthly rises over the recharge season. Months during which water levels fall are ignored. This cumulative rise may be the same as the difference between the *trough* and *peak* levels, but only if infiltration has a sensibly uninterrupted impact on groundwater levels throughout the recharge season.

The summed rise for each year is called the *annual fluctuation,* and the mean of the annual fluctuations over the period of record is termed the *mean annual range.* This is assumed to be proportional to the mean annual recharge at the site over the same period. In turn, this also assumes that the natural discharge (via, for example, springs and seepages) is constant. The cumulative rise has less utility as an index of groundwater replenishment when recharge is particularly episodic.

For most wells, the errors caused by this assumption will be small, but at some observation sites, levels have been seriously affected by pumping for part of the period of record. At other sites, data for some years may be suspect or missing. Consequently, the determination of the mean annual range may not always be made for the full period of record but only for those years where reliable data are available. The method is only applicable to wells with a distinct response to recharge events.

Maximum Annual Range

The largest annual fluctuation determined for the period of record.

Minimum Annual Range

The smallest annual fluctuation determined for the period of record.

Trough Level

The groundwater level, in metres above (or below) Ordnance Datum, at the end of the summer recession. In slow-responding wells the trough may be reached towards the end, or beyond the end, of the calendar year. During periods of drought some wells may be dry for extended periods.

Peak Level

The groundwater level, in metres above (or below) Ordnance Datum, at the beginning of the summer recession. If no recharge occurs during the recharge season, the peak level is taken as the highest level recorded between the beginning of August and the end of the following July.

Fluctuation as a % of Mean Range

The cumulative end-of-month rises for that particular recharge year expressed as a percentage of the mean annual range.

Areal Assessment of Recharge

The values of annual range for individual monitoring wells are considered to be proportional to recharge for the aquifer in which the site is located. Calculations have been made of the actual mean annual replenishment of aquifers, and so by combining the annual range, expressed as a percentage of the long term mean, with these estimates, it is possible to arrive at figures for total aquifer recharge in a particular year. The estimates are given in Table 2, tabulated by EA region and by aquifer unit. The mean annual replenishment figures were calculated in 1982 as part of a comprehensive assessment of the groundwater resources of the United Kingdom[2]. There are insufficient water level monitoring data for the calculation to be extended

TABLE 2 ANNUAL REPLENISHMENT TO THE MORE IMPORTANT AQUIFERS IN ENGLAND AND WALES OVER THE PERIOD 1995/1996 TO 1999/2000

EA Region	MAR ($m^3 \times 10^6$)	Replenishment ($m^3 \times 10^6$) 1995–96	1996–97	1997–98	1998–99	1999–00
Chalk and Upper Greensand aquifer						
Anglian	955	575 (60)	930 (95)	1250 (130)	1185 (125)	690 (70)
Southern	1230	805 (65)	790 (65)	1600 (130)	1495 (120)	1300 (105)
South West	1150	1165 (100)	910 (80)	1435 (125)	1180 (100)	1445 (125)
Thames	975	640 (65)	705 (70)	1370 (140)	1270 (130)	1160 (120)
North East	320	245 (75)	180 (55)	435 (135)	375 (115)	315 (95)
Totals	4630	3415 (75)	3755 (80)	5805 (125)	5475 (120)	4610 (100)
Lincolnshire Limestone aquifer						
Anglian	85	95 (110)	105 (125)	90 (100)	85 (100)	61 (70)
Permo-Triassic sandstones aquifer						
North East	310	230 (75)	320 (100)	470 (150)	345 (110)	265 (85)
North West	330	115 (35)	280 (85)	270 (80)	380 (115)	255 (75)
Midlands	530	485 (90)	290 (55)	710 (135)	805 (155)	545 (105)
South West	245	270 (110)	130 (55)	370 (150)	215 (90)	294 (120)
Welsh	30	35 (125)	20 (75)	25 (95)	45 (170)	60 (220)
Totals	1445	1135 (80)	1045 (70)	1850 (130)	1795 (125)	1420 (100)
Magnesian Limestone aquifer						
North East	205	120 (55)	140 (65)	360 (175)	245 (120)	190 (90)
Midlands	40	35 (85)	45 (110)	35 (90)	45 (115)	40 (100)
Totals	245	155 (60)	180 (75)	400 (160)	295 (120)	230 (95)

MAR = Mean Annual Replenishment
Percentages of the annual mean are shown in parentheses. Values have been rounded to reflect the uncertainty in source data and recharge calculation.

outside England. Given the nature of the data upon which the estimates are based, and the limitations in the procedure for assessing recharge, the results should be used as a general guide only.

References

1. Monkhouse, R.A., and Murti, P.K. 1981. The Rationalisation of Groundwater Observation Well Networks in England and Wales. Institute of Geological Sciences, Unpublished Report No. WD/81/1, 18p.

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Well Register and Statistics

Aquifer: Superficial Deposits

IJ28001 **Templepatrick** H.A: 203
NGR: IJ 22488620 M.A: DOE Northern Ireland
EEC Unit: 4 Level: 43.83m AOD
Comment: Influenced by artificial drainage which suppresses groundwater peaks.

Period: 1984–2000
Mean ann. range: 1.70m
Maximum ann. range: 2.51m
Minimum ann. range: 0.98m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	41.88	44.2	89
1996–97	40.48	44.2	
1997–98	40.55	41.52	
1998–99	40.65	43.15	15
1999–2000	42.12	43.65	62

SO44004 **Stretton Sugwas, Roman Road** H.A:
NGR: SO 46834253 M.A: EA Wales
EEC Unit: Level: 68.04m AOD
Comment: No data for 1997, data quality problems and gaps in data 1997–2000.

Period: 1973–1999
Mean ann. range: 1.61m
Maximum ann. range: 4.96m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	58.2	60.73	
1996–97	57.9	60.12	
1997–98	57.86	60.44	
1998–99	57.2	60.44	
1999–2000	57.2	60.37	

Aquifer: Chalk

ID30001 **Killyglen (NI)** H.A: 205
NGR: ID 36630310 M.A: DOE Northern Ireland
EEC Unit: 6 Level: 139.23m AOD
Comment: Index well Good representative site with no known artificial influences.

Period: 1985–2000
Mean ann. range: 6.56m
Maximum ann. range: 9.24m
Minimum ann. range: 4.09m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	112.6	119.9	11
1996–97	112.7	119.4	10
1997–98	113.4	118.9	80
1998–99	113.3	117.9	66
1999–2000	113.0	119.9	11

SE94005 **Dalton Holme** H.A: 26
NGR: SE 96514530 M.A: EA North East
EEC Unit: 32 Level: 34.5m AOD
Comment: Index well. Logger installed. Licensed abstraction well. Pumping was stopped to allow 16 hour recovery before levels measured. Maximum water level possibly controlled by the level of spring outlets

Period: 1889–2000
Mean ann. range: 6.26m
Maximum ann. range: 11.40m
Minimum ann. range: 0.34m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	11.02	22.1	47
1996–97	10.09	15.14	66
1997–98	10.73	21.27	12
1998–99	14.11	21.38	11
1999–2000	13.91	21.38	92

SE95006 **Wetwang** H.A: 31
NGR: SE 95785939 M.A: EA North East
EEC Unit: 26 Level: 42.28m AOD
Comment: Index well Logger installed.

Period: 1971–2000
Mean ann. range: 9.41m
Maximum ann. range: 16.80m
Minimum ann. range: 1.43m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	17.8	31.42	10
1996–97	17.41	25.56	52
1997–98	19.22	31.1	17
1998–99	19.24	31.1	12
1999–2000	19.26	30.5	10

SE97031 **Green Lane** H.A: 26
NGR: SE 93457079 M.A: EA North East
EEC Unit: 30 Level: 92.73m AOD
Comment:

Period: 1971–2000
Mean ann. range: 11.20m
Maximum ann. range: 21.00m
Minimum ann. range: 1.24m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	55.6	70.81	73
1996–97	54.77	64.05	41
1997–98	55.6	71.43	12
1998–99	59.31	80.72	14
1999–2000	57.49	80.72	11

SP90026 **Champneys** H.A: 39
NGR: SP 94700875 M.A: EA Thames
EEC Unit: 17 Level: 183.14m AOD
Comment: Closed 1999.

Period: 1962–1996
Mean ann. range: 8.05m
Maximum ann. range: 19.40m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	122.7	138.3	
1996–97	120.9	126.5	
1997–98			
1998–99			
1999–2000			

SP91059 **Pitstone Green Farm** H.A: 33
NGR: SP 93801570 M.A: EA Anglia
EEC Unit: 9 Level: 110.14m AOD
Comment: Influenced by abstractions from Pitstone Cement Works: levels may be lower than in natural conditions.

Period: 1970–1999
Mean ann. range: 0.64m
Maximum ann. range: 2.07m
Minimum ann. range: 0.01m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	108.8	109.5	15
1996–97	108.8	109.5	18
1997–98	108.9	109.4	13
1998–99	108.9	109.6	58
1999–2000	108.9	109.5	

SU01005B **West Woodyates Manor** H.A: 43
NGR: SU 01601949 M.A: EA South West
EEC Unit: 4 Level: 110.88m AOD
Comment: Index well.

Period: 1942–2000
Mean ann. range: 26.80m
Maximum ann. range: 36.20m
Minimum ann. range: 4.72m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	69.54	103.4	89
1996–97	69.48	93.93	92
1997–98	70.91	98.71	12
1998–99	72.01	104.0	10
1999–2000	71.47	104.0	15

SU17057 **Rockley** H.A: 39
NGR: SU 16557174 M.A: EA Thames
EEC Unit: 12 Level: 146.57m AOD
Comment: Index well. Telemetry site.

Period: 1933–2000
Mean ann. range: 9.93m
Maximum ann. range: 14.60m
Minimum ann. range: 0.38m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	129.1	143.9	76
1996–97	128.7	137.0	35
1997–98	128.5	141.4	13
1998–99	131.1	143.6	12
1999–2000	130.6	143.6	12

SU32003 **Baileys Down Farm** H.A: 42
NGR: SU 38172743 M.A: EA Southern
EEC Unit: 33 Level: 88.22m AOD
Comment:

Period: 1964–2000
Mean ann. range: 14.50m
Maximum ann. range: 30.00m
Minimum ann. range: 0.48m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	35.44	60.26	11
1996–97	34.21	51.15	33
1997–98	33.68	39.82	98
1998–99	35.12	47.33	96
1999–2000	35.77	49.74	14

SU34008D **Clanville Lodge Gate** H.A: 42
NGR: SU 32224902 M.A: EA Southern
EEC Unit: 34 Level: 101.55m AOD
Comment: Replaced SU34/8A in 1986.

Period: 1963–2000
Mean ann. range: 6.23m
Maximum ann. range: 11.90m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	78.86	91.57	
1996–97	77.16	85.04	
1997–98	73.65	79.96	16
1998–99	79.27	83.87	12
1999–2000	80.71	87.24	11

SU35014 **Woodside** H.A: 42
NGR: SU 33155645 M.A: EA Southern
EEC Unit: 34 Level: 135.15m AOD
Comment:

Period: 1960–2000
Mean ann. range: 14.70m
Maximum ann. range: 28.70m
Minimum ann. range: 0.30m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	98.3	127.4	
1996–97	96.15	109.8	20
1997–98	96.16	99.8	10
1998–99	99.19	110.2	14
1999–2000	99.85	121.7	12

SU51001 Upper Hill Farm H.A: 42
NGR: SU 59151685 M.A: EA Southern
EEC Unit: 30 Level: 92.81m AOD
Comment: Borehole shows increased magnitude of seasonal fluctaution after 1993, limiting reliabilty of Mean Annual Recharge data.

Period: 1973–2000
Mean ann. range: 1.60m
Maximum ann. range: 4.30m
Minimum ann. range: 0.16m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	44.3	48.54	29
1996–97	44.21	44.83	39
1997–98	44.18	44.82	
1998–99	44.47	45.46	10
1999–2000	44.34	45.44	48

SU53094 Abbotstone H.A: 42
NGR: SU 55863498 M.A: EA Southern
EEC Unit: 31 Level: 94.82m AOD
Comment:

Period: 1976–2000
Mean ann. range: 0.68m
Maximum ann. range: 1.33m
Minimum ann. range: 0.19m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	65.54	66.63	55
1996–97	65.43	66.01	50
1997–98	65.35	65.96	81
1998–99	65.52	66.25	93
1999–2000	65.63	66.27	87

SU57159 Calversleys Farm H.A: 39
NGR: SU 56287530 M.A: EA Thames
EEC Unit: 13 Level: 123.74m AOD
Comment:

Period: 1974–2000
Mean ann. range: 5.52m
Maximum ann. range: 10.40m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	68.8	78.7	81
1996–97	67.24	73.86	
1997–98	66.68	71.8	86
1998–99	68.63	76.9	13
1999–2000	69.86	78.56	15

SU61032 Chidden Farm H.A: 42
NGR: SU 65781775 M.A: EA Southern
EEC Unit: 29 Level: 104.79m AOD
Comment:

Period: 1958–2000
Mean ann. range: 15.40m
Maximum ann. range: 23.70m
Minimum ann. range: 3.90m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	64.79	88.41	78
1996–97	64.94	77.83	93
1997–98	66.51	80.51	12
1998–99	68.09	87.74	10
1999–2000	67.32	86.64	11

SU61046 Hinton Manor Farm H.A: 42
NGR: SU 68901532 M.A: EA Southern
EEC Unit: 28 Level: 141.41m AOD
Comment: No data since mid 1999.

Period: 1953–1999
Mean ann. range: 13.90m
Maximum ann. range: 27.20m
Minimum ann. range: 0.20m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	39.94	64.91	41
1996–97	34.06	40.86	
1997–98	34.59	40.61	11
1998–99	37.36	51.17	
1999–2000	42.1	54.26	

SU64028 Lower Wield Farm H.A: 42
NGR: SU 63604049 M.A: EA Southern
EEC Unit: 32 Level: 158.95m AOD
Comment:

Period: 1961–2000
Mean ann. range: 2.40m
Maximum ann. range: 7.29m
Minimum ann. range: 0.20m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	95.04	99.36	57
1996–97	93.74	96.45	55
1997–98	92.1	95.14	12
1998–99	94.12	95.56	14
1999–2000	95.22	98.02	12

SU68049 Well Place Farm H.A: 39
NGR: SU 64428525 M.A: EA Thames
EEC Unit: 14 Level: 90.47m AOD
Comment: Dipped monthly since 1999.

Period: 1976–1999
Mean ann. range: 5.53m
Maximum ann. range: 17.50m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	66.57	73.26	66
1996–97	57.48	70.91	0
1997–98	54.92	68.62	25
1998–99	57.97	71.28	11
1999–2000	65.35	71.28	10

SU71023 Compton House H.A: 41
NGR: SU 77561491 M.A: EA Southern
EEC Unit: 27 Level: 81.37m AOD
Comment: Index well. Previously numbered SU14/1.

Period: 1894–2000
Mean ann. range: 21.10m
Maximum ann. range: 38.10m
Minimum ann. range: 0.39m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	28.74	66.1	48
1996–97	29.14	41.45	55
1997–98	30.03	58.14	13
1998–99	31.49	61.95	13
1999–2000	30.97	61.95	88

SU73008 Faringdon Station H.A: 39
NGR: SU 70483491 M.A: EA Southern
EEC Unit: 21 Level: 120.7m AOD
Comment:

Period: 1966–2000
Mean ann. range: 11.40m
Maximum ann. range: 21.80m
Minimum ann. range: 2.06m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	93.18	116.5	72
1996–97	92.78	104.0	73
1997–98	92.4	102.5	95
1998–99	96.61	107.3	14
1999–2000	95.79	115.2	10

SU76046 Riseley Mill H.A: 39
NGR: SU 73676251 M.A: EA Thames
EEC Unit: 18 Level: 52.35m AOD
Comment: Borehole shows minimal seasonal response.

Period: 1975–2000
Mean ann. range: 1.88m
Maximum ann. range: 7.80m
Minimum ann. range: 0.03m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	32.26	34.22	
1996–97	32.57	34.25	
1997–98	32.77	34.25	
1998–99	33.16	35.32	
1999–2000	34.05	35.68	

SU78045A Stonor Park H.A: 39
NGR: SU 74198924 M.A: EA Thames
EEC Unit: 15 Level: 121.29m AOD
Comment: Index well. Telemetry site.

Period: 1961–2000
Mean ann. range: 7.90m
Maximum ann. range: 18.70m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	71.41	85.17	64
1996–97	63.02	76.54	0.4
1997–98	62.02	73.91	15
1998–99	64.97	81.79	17
1999–2000	71.2	81.79	12

SU81001 Chilgrove House H.A: 41
NGR: SU 83521438 M.A: EA Southern
EEC Unit: 27 Level: 77.18m AOD
Comment: Index well, longest continuous record held on archive. Possibly longest record in world. Levels have been known to be affected by local abstractions. Occasionally overflows.

Period: 1836–2000
Mean ann. range: 25.20m
Maximum ann. range: 48.00m
Minimum ann. range: 0.93m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	34.12	76.18	55
1996–97	34.47	53.45	65
1997–98	36.03	70.28	13
1998–99	38.74	74.72	12
1999–2000	38.06	74.72	98

SU87001 Folly Cottage H.A: 39
NGR: SU 83367885 M.A: EA Thames
EEC Unit: 19 Level: 50.99m AOD
Comment: No data for Apr 1998 to Mar 1999.

Period: 1950–2000
Mean ann. range: 5.91m
Maximum ann. range: 11.10m
Minimum ann. range: 0.36m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	29.88	40.57	88
1996–97	29.02	35.52	27
1997–98	28.89	33.42	
1998–99	31.42	34.45	
1999–2000	31.35	35.97	86

SU89007 Piddington H.A: 39
NGR: SU 81039417 M.A: EA Thames
EEC Unit: 16 Level: 110.11m AOD
Comment: 6 months data missing 2000.

Period: 1966–2000
Mean ann. range: 4.26m
Maximum ann. range: 11.40m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	96.26	103.9	71
1996–97	93.6	99.52	4
1997–98	92.54	99.91	16
1998–99	95.79	103.9	14
1999–2000	97.13	103.9	

SY68034 Ashton Farm H.A: 44
NGR: SY 66168805 M.A: EA South West
EEC Unit: 5 Level: 72.16m AOD
Comment: Index well. Could be affected by local abstractions. The chalk in the area is well faulted which could have a significant effect on the hydrogeology. Local layering of the aquifer will affect groundwater

Period: 1974–2000
Mean ann. range: 5.93m
Maximum ann. range: 7.95m
Minimum ann. range: 1.18m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	63.98	71.35	11
1996–97	64.16	71.01	11
1997–98	64.22	71.2	11
1998–99	64.82	71.36	10
1999–2000	64.98	71.36	12

TA06016 **Nafferton Pumping Station** H.A: 26
NGR: TA M.A: EA North East
EEC Unit: 31 Level: 80.02m AOD
Comment: Logger installed.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1964–2000		1995–96	17.12	24.06	72
Mean ann. range:	5.29m	1996–97	16.71	20.94	55
Maximum ann. range:	12.40m	1997–98	17.98	23.83	14
Minimum ann. range:	1.26m	1998–99	18.25	24.85	10
		1999–2000	18.18	24.85	98

TA07028 **Hunmanby Hall** H.A: 27
NGR: TA M.A: EA North East
EEC Unit: 27 Level: 79.73m AOD
Comment: Logger installed.

Period: 1976–2000		1995–96	28.33	36.21	65
Mean ann. range:	5.68m	1996–97	26.73	32.12	16
Maximum ann. range:	13.60m	1997–98	26.88	36.15	15
Minimum ann. range:	0.00m	1998–99	30.79	37.98	10
		1999–2000	30.69	37.98	82

TA10006 **Pimlico** H.A: 29
NGR: TA M.A: EA Anglia
EEC Unit: Level: 66.28m AOD
Comment: No data Sep '51 to Aug '59 and 1976. Manually dipped. Reliable data, but

Period: 1929–2000		1995–96	9.83	25.03	
Mean ann. range:	10.60m	1996–97	9.82	11.48	
Maximum ann. range:	24.90m	1997–98	9.82	20.56	
Minimum ann. range:	0.00m	1998–99	12.22	24.44	11
		1999–2000	12.03	24.44	10

TA10063 **Aylesby** H.A:
NGR: TA M.A: EA Anglia
EEC Unit: Level: 31.25m AOD
Comment: Index well replaced Keelby Grange. Telemetry installed 1997, manually dipped monthly.

Period: 1978–2000		1995–96	7.65	19.9	
Mean ann. range:	5.48m	1996–97	5.98	9.36	38
Maximum ann. range:	11.30m	1997–98	6.28	16.75	17
Minimum ann. range:	0.15m	1998–99	8.64	20.5	13
		1999–2000	13.02	20.5	12

TA11158 **Keelby Grange** H.A: 29
NGR: TA M.A: EA Anglia
EEC Unit: 1 Level: 29.32m AOD
Comment: Telemetry removed due to access problems 2000, replaced as index well by Aylesby.

Period: 1980–2000		1995–96	4.92	16.48	16
Mean ann. range:	4.70m	1996–97	4.07	6.97	43
Maximum ann. range:	11.10m	1997–98	4.92	13.12	17
Minimum ann. range:	0.66m	1998–99	6.56	16.92	14
		1999–2000	10.72	16.92	

TA21041A **Church Farm (Sunk Island)** H.A: 26
NGR: TA M.A: EA North East
EEC Unit: 33 Level: 3.2m AOD
Comment: Previously numbered TA21/14. No data 1996, 1997.

Period: 1971–2000		1995–96	0.79	1.79	
Mean ann. range:	0.59m	1996–97			
Maximum ann. range:	1.09m	1997–98	1.57	1.78	
Minimum ann. range:	0.21m	1998–99	1.49	1.93	57
		1999–2000	1.55	2.01	82

TF29049 **Grainsby** H.A: 29
NGR: TF 26049823 M.A: EA Anglia
EEC Unit: 1 Level: 45.91m AOD
Comment: Telemetry removed 1999. Reliable data.

Period: 1977–2000		1995–96	6.43	17.9	16
Mean ann. range:	5.77m	1996–97	5.27	7.97	28
Maximum ann. range:	11.40m	1997–98	5.36	15.01	14
Minimum ann. range:	0.09m	1998–99	7.89	19.38	13
		1999–2000	10.96	19.38	11

TF72011 **Off Farm** H.A: 33
NGR: TF 77102330 M.A: EA Anglia
EEC Unit: 18 Level: 81.12m AOD
Comment: Represents naturally occuring conditions. Reliable data. No data after 1998.

Period: 1971–1997		1995–96	26.17	34.94	13
Mean ann. range:	5.90m	1996–97	25.55	30.29	75
Maximum ann. range:	16.80m	1997–98	27.62	34.71	
Minimum ann. range:	0.58m	1998–99	29.16	34.71	
		1999–2000			

TF73009 **Coe Ltd. Bircham** H.A: 33
NGR: TF 77903270 M.A: EA Anglia
EEC Unit: 20 Level: 55.97m AOD
Comment: Represents naturally occuring conditions. Reliable data. Limited seasonal fluctuations reduce confidence in Mean Annual Recharge figures.

Period: 1971–1999		1995–96	42.53	48.55	0
Mean ann. range:	2.50m	1996–97	40.48	43.67	80
Maximum ann. range:	6.83m	1997–98	40.82	46.49	22
Minimum ann. range:	0.00m	1998–99	43.81	48.32	17
		1999–2000	46.37	48.32	21

TF80033 **Houghton Common** H.A: 33
NGR: TF 87300526 M.A: EA Anglia
EEC Unit: 15 Level: 73.25m AOD
Comment: Represents naturally occuring conditions. Reliable data.

Period: 1971–2000		1995–96	32.7	37.4	35
Mean ann. range:	2.25m	1996–97	31.45	34.45	14
Maximum ann. range:	4.84m	1997–98	33.5	36.02	10
Minimum ann. range:	0.64m	1998–99	34	38.8	
		1999–2000	33.23	39.3	70

TF81002A **Washpit Farm** H.A: 33
NGR: TF 81381960 M.A: EA Anglia
EEC Unit: 17 Level: 80.2m AOD
Comment: Index well. Previously numbered TF81/2. Represents naturally occuring conditions. Reliable data. The chalk in the area is unconfined.

Period: 1950–2000		1995–96	41.55	46.83	
Mean ann. range:	2.94m	1996–97	40.77	43.08	80
Maximum ann. range:	7m	1997–98	41.36	46.43	17
Minimum ann. range:	0.00m	1998–99	43.03	47.74	13
		1999–2000	43.57	47.74	80

TF83001 **South Creake** H.A: 34
NGR: TF 85783606 M.A: EA Anglia
EEC Unit: 20 Level: 23.41m AOD
Comment:

Period: 1952–2000		1995–96	19.69	22.85	
Mean ann. range:	1.86m	1996–97	19.46	20.36	
Maximum ann. range:	4.82m	1997–98	18.84	22.02	16
Minimum ann. range:	0.00m	1998–99	20.13	22.88	12
		1999–2000	20.76	22.88	57

TF92005 **Tower Hills Pumping Station** H.A: 30
NGR: TF 98692183 M.A: EA Anglia
EEC Unit: 28 Level: 45.52m AOD
Comment:

Period: 1974–2000		1995–96	24.18	26.45	16
Mean ann. range:	1.23m	1996–97	24.13	25.2	96
Maximum ann. range:	2.95m	1997–98	24.19	25.86	14
Minimum ann. range:	0.19m	1998–99	24.7	26.09	10
		1999–2000	24.95	26.09	60

TG00092 **High Elm Farm** H.A: 33
NGR: TG 04400020 M.A: EA Anglia
EEC Unit: 30 Level: 59.92m AOD
Comment: Represents naturally occuring conditions. Reliable data, but limited seasonal fluctuations means that Mean Annual Recharge values are unreliable.

Period: 1972–1999		1995–96	45.82	53.19	10
Mean ann. range:	4.58m	1996–97	45.82	47.75	48
Maximum ann. range:	11.30m	1997–98	45.82	51.79	16
Minimum ann. range:	0.48m	1998–99	46.83	53.85	14
		1999–2000	47.25	53.85	46

TG03025B **Brinton Farm** H.A: 34
NGR: TG 03823583 M.A: EA Anglia
EEC Unit: 22 Level: 43.2m AOD
Comment: Borehole occasionally artesian.

Period: 1952–2000		1995–96	39.3	43.06	
Mean ann. range:	1.36m	1996–97	39.57	42.62	13
Maximum ann. range:	3.86m	1997–98	41.12	42.8	
Minimum ann. range:	0.16m	1998–99	41.12	43.38	13
		1999–2000	41.81	43.38	55

TG11005 The Spinney, Costessey H.A: 34
NGR: TG 16911101 M.A: EA Anglia
EEC Unit: 29 Level: 17.92m AOD
Comment:

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1952–2000		1995–96	8.29	10.55	
Mean ann. range:	1.12m	1996–97	8.29	9.59	12
Maximum ann. range:	2.37m	1997–98	8.56	10.12	13
Minimum ann. range:	0.17m	1998–99	8.95	10.24	11
		1999–2000	9.03	10.24	70

TG12007 Heydon Pumping Station H.A: 34
NGR: TG 11262722 M.A: EA Anglia
EEC Unit: 24 Level: 44.98m AOD
Comment:

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1974–2000		1995–96	40.55	42.51	61
Mean ann. range:	0.81m	1996–97	40.55	41.52	10
Maximum ann. range:	1.78m	1997–98	40.89	41.8	10
Minimum ann. range:	0.00m	1998–99	41.21	42.19	11
		1999–2000	41.59	42.19	60

TG21009 Frettenham Depot H.A: 34
NGR: TG 24001657 M.A: EA Anglia
EEC Unit: 25 Level: 6.73m AOD
Comment:

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1952–1998		1995–96	4.56	6.47	27
Mean ann. range:	1.07m	1996–97	4.55	5.26	64
Maximum ann. range:	2.11m	1997–98	4.42	5.91	14
Minimum ann. range:	0.23m	1998–99	4.61	5.91	
		1999–2000			

TG21010 Grange Farm H.A: 34
NGR: TG 26911139 M.A: EA Anglia
EEC Unit: 32 Level: 35.52m AOD
Comment: No data 1997, 1998.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1984–2000		1995–96	18.03	18.54	
Mean ann. range:	0.68m	1996–97	18.11	18.54	
Maximum ann. range:	2.25m	1997–98			
Minimum ann. range:	0.00m	1998–99	17.89	18.12	
		1999–2000	17.89	18.3	

TG23021 Melbourne House H.A: 34
NGR: TG 29323101 M.A: EA Anglia
EEC Unit: 26 Level: 17.18m AOD
Comment:

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1994–2000		1995–96	12.72	13.83	23
Mean ann. range:	0.42m	1996–97	12.72	13.29	11
Maximum ann. range:	0.70m	1997–98	12.77	13.28	18
Minimum ann. range:	6.81m	1998–99	12.77	13.75	24
		1999–2000	13.25	13.75	10

TG31020 Woodbastwick Hall H.A: 34
NGR: TG 33651606 M.A: EA Anglia
EEC Unit: 27 Level: 3.04m AOD
Comment:

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1974–2000		1995–96	0.47	0.95	82
Mean ann. range:	0.28m	1996–97	0.47	0.76	91
Maximum ann. range:	0.49m	1997–98	0.48	0.86	60
Minimum ann. range:	0.11m	1998–99	0.48	0.93	12
		1999–2000	0.61	0.93	46

TG32016 Brumstead Hall, Stalham H.A: 34
NGR: TG 37002682 M.A: EA Anglia
EEC Unit: Level: 7.56m AOD
Comment:

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1978–2000		1995–96	0.86	2.17	12
Mean ann. range:	0.50m	1996–97	0.86	1.35	88
Maximum ann. range:	1.22m	1997–98	0.91	1.57	12
Minimum ann. range:	0.06m	1998–99	1.22	1.92	12
		1999–2000	1.46	1.94	88

TL11046 Mackerye End Farm H.A: 38
NGR: TL 15601555 M.A: EA Thames
EEC Unit: 1 Level: 122.38m AOD
Comment: Previously numbered TL11/4 Removed 1999, borehole consistently dried during mild drought.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1963–1998		1995–96	82.92	84.67	17
Mean ann. range:	0.80m	1996–97	82.92	83.92	62
Maximum ann. range:	2.70m	1997–98	82.92	83.43	
Minimum ann. range:	0.10m	1998–99	82.92	82.92	
		1999–2000			

TL1109 The Holt H.A: 38
NGR: TL 16921965 M.A: EA Thames
EEC Unit: 2 Level: 138.17m AOD
Comment: Pumping Aug 2000. To be replaced by TL12/122 Lilley Bottom.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1964–2000		1995–96	86.19	91.04	23
Mean ann. range:	2.20m	1996–97	84.45	87.35	1
Maximum ann. range:	5.59m	1997–98	83.87	85.88	89
Minimum ann. range:	0.00m	1998–99	83.89	89.07	15
		1999–2000	85.43	89.07	52

TL12122 Lilley Bottom H.A:
NGR: TL 15702274 M.A: EA Thames
EEC Unit: Level: m. AOD
Comment: Replaced The Holt, records since 1979, recorder installed.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period:		1995–96			
Mean ann. range:	m	1996–97			
Maximum ann.	m	1997–98			
Minimum ann. range:	m	1998–99			
		1999–2000			

TL13024 West Hitchin H.A: 33
NGR: TL 12003026 M.A: EA Anglia
EEC Unit: 10 Level: 81.58m AOD
Comment: Represents naturally occuring conditions. Reliable data.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1970–1999		1995–96	73.06	75.29	10
Mean ann. range:	1.63m	1996–97	72.5	74.6	12
Maximum ann. range:	3.90m	1997–98	73.17	74.69	11
Minimum ann. range:	0.00m	1998–99	73.68	75.48	10
		1999–2000	73.71	75.48	

TL33004 Therfield Rectory H.A: 38
NGR: TL 33303720 M.A: EA Thames
EEC Unit: 4 Level: 154.81m AOD
Comment: Index well. To be replaced by TL33/67 Hay Farm. Early measurements (c 1883 to 1949) have been corrected for measuring line shrinkage or stretching assuming a uniform change. Lengthy lag between infiltration and recharge.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1883–2000		1995–96	76.44	88.2	31
Mean ann. range:	5.70m	1996–97	71.5	78.29	0
Maximum ann. range:	16.20m	1997–98	71.5	73.03	25
Minimum ann. range:	0.00m	1998–99	71.61	79.28	12
		1999–2000	73.26	79.28	85

TL42006 Hixham Hall H.A: 38
NGR: TL 45362676 M.A: EA Thames
EEC Unit: 5 Level: 111.34m AOD
Comment:

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1964–2000		1995–96	71.14	76.22	24
Mean ann. range:	2.59m	1996–97	68.56	72.63	14
Maximum ann. range:	7.29m	1997–98	67.93	70.1	81
Minimum ann. range:	0.00m	1998–99	68.73	73.26	16
		1999–2000	70.43	73.26	95

TL42008 Berden Hall H.A: 38
NGR: TL 46692955 M.A: EA Thames
EEC Unit: 6 Level: 107.89m AOD
Comment:

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1964–2000		1995–96	68.39	73.6	47
Mean ann. range:	2.37m	1996–97	66.38	70.77	76
Maximum ann. range:	5.26m	1997–98	66.19	68.65	10
Minimum ann. range:	0.00m	1998–99	66.83	71.29	19
		1999–2000	68.07	71.7	14

TL44012 Redlands Hall H.A: 33
NGR: TL 45224182 M.A: EA Anglia
EEC Unit: 12 Level: 76.19m AOD
Comment: Index well. Represents naturally occuring conditions. Reliable data. There is some layering of the aquifer in the area which will affect groundwater movement.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1963–2000		1995–96	36.09	51	70
Mean ann. range:	8.29m	1996–97	32.95	42.56	
Maximum ann. range:	17.10m	1997–98	32.3	37.12	55
Minimum ann. range:	0.00m	1998–99	32.34	44.64	11
		1999–2000	36.35	44.64	89

TL55109 **Lower Farm** H.A:
NGR: TL 59255605 M.A: EA Anglia
EEC Unit: Level: 57.65m AOD
Comment: Represents naturally occuring conditions. Reliable data.

Period: 1983–2000
Mean ann. range: 4.58m
Maximum ann. range: 9.87m
Minimum ann. range: 1.06m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	14.79	25.08	44
1996–97	12.36	17.9	22
1997–98	11.81	16.85	99
1998–99	11.81	21.5	13
1999–2000	17.75	21.5	65

TL72054 **Rectory Road** H.A: 37
NGR: TL 79822516 M.A: EA Anglia
EEC Unit: 46 Level: 67.63m AOD
Comment:

Period: 1968–2000
Mean ann. range: 1.42m
Maximum ann. range: 6.69m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	13.74	15.49	84
1996–97	13.74	15.33	60
1997–98	13.78	15.82	11
1998–99	15.29	19.47	
1999–2000	15	19.47	33

TL84006 **Smeetham Hall Cottages** H.A: 36
NGR: TL 84654106 M.A: EA Anglia
EEC Unit: 44 Level: 55.03m AOD
Comment:

Period: 1963–2000
Mean ann. range: 1.25m
Maximum ann. range: 2.36m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	25.43	28.32	25
1996–97	25.36	26.29	22
1997–98	25.21	26.85	12
1998–99	25.54	27.31	15
1999–2000	26.27	27.31	11

TL86110 **Cattishall Farm** H.A: 33
NGR: TL 88506470 M.A: EA Anglia
EEC Unit: 13 Level: 61.65m AOD
Comment: Represents naturally occuring conditions. Reliable data.

Period: 1969–2000
Mean ann. range: 2.72m
Maximum ann. range: 7.35m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	31.61	37.19	11
1996–97	30.91	32.64	38
1997–98	30.57	34.21	13
1998–99	32.24	34.85	92
1999–2000	33.48	35.05	55

TL89037 **Grimes Graves** H.A: 33
NGR: TL 81319001 M.A: EA Anglia
EEC Unit: 15 Level: 17.22m AOD
Comment: No data June '95 to Feb '96 Represents naturally occuring conditions. Reliable data.

Period: 1971–2000
Mean ann. range: 2.87m
Maximum ann. range: 5.21m
Minimum ann. range: 0.09m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	6.24	12.16	
1996–97	5.76	7.91	68
1997–98	6.9	10.71	11
1998–99	7.41	11.36	13
1999–2000	8.58	11.36	67

TL92001 **Lexden Pumping Station** H.A: 37
NGR: TL 96572562 M.A: EA Anglia
EEC Unit: 45 Level: 15.6m AOD
Comment:

Period: 1961–2000
Mean ann. range: 3.05m
Maximum ann. range: 6.98m
Minimum ann. range: 0.48m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	0.13	6.24	40
1996–97	−0.25	3.86	14
1997–98	0.68	4.84	13
1998–99	1.88	5.22	45
1999–2000	4.56	5.6	

TM15112 **Dial Farm** H.A: 35
NGR: TM M.A: EA Anglia
EEC Unit: 43 Level: 64.6m AOD
Comment: Index well.

Period: 1968–2000
Mean ann. range: 0.45m
Maximum ann. range: 1.07m
Minimum ann. range: 0.05m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	25.07	25.89	11
1996–97	24.69	25.31	18
1997–98	24.61	25.26	13
1998–99	24.62	25.61	12
1999–2000	25.22	25.99	13

TM26095 **Strawberry Hill** H.A: 35
NGR: TM M.A: EA Anglia
EEC Unit: 39 Level: 48.57m AOD
Comment: Missing data, late 1995, late 1998.

Period: 1974–2000
Mean ann. range: 0.37m
Maximum ann. range: 0.80m
Minimum ann. range: 0.03m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	26.61	27.23	
1996–97	26.56	26.97	87
1997–98	26.51	26.91	11
1998–99	26.63	27.13	
1999–2000	26.9	27.17	75

TQ01133 **Chantry Post Sullington** H.A: 41
NGR: TQ M.A: EA Southern
EEC Unit: 24 Level: 166.33m AOD
Comment:

Period: 1977–2000
Mean ann. range: 12.20m
Maximum ann. range: 23.40m
Minimum ann. range: 7.71m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	93.41	117.3	69
1996–97	92.98	103.0	76
1997–98	94.31	105.9	99
1998–99	95.96	106.2	71
1999–2000	94.33	106.2	84

TQ21011A **Old Rectory Pyecombe** H.A: 41
NGR: TQ M.A: EA Southern
EEC Unit: 23 Level: 106.38m AOD
Comment: Previously numbered TQ21/11. No significant seasonal fluctuations.

Period: 1958–2000
Mean ann. range: 3.64m
Maximum ann. range: 11.00m
Minimum ann. range: 0.40m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	70.98	78.62	
1996–97	70.9	72.64	
1997–98	71.4	76.37	
1998–99	70.62	76.59	
1999–2000	70.62	76.59	

TQ28119 **Trafalgar Square** H.A: 39
NGR: TQ M.A: EA Thames
EEC Unit: 20 Level: 12.6m AOD
Comment: Previously numbered TQ28/119B. Logger installed. Confined aquifer. Major long term influence from abstractions. Recovery in levels since 1950's symptomatic of rising groundwater in London.

Period: 1875–2000
Mean ann. range: 2.63m
Maximum ann. range: 12.00m
Minimum ann. range: 0.69m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	−43.69	−39.5	
1996–97	−41.55	−38.3	
1997–98	−39.8	−37.2	
1998–99	−38.25	−35.2	
1999–2000	−36.11	−34.8	

TQ31050 **North Bottom** H.A: 41
NGR: TQ M.A: EA Southern
EEC Unit: 22 Level: 120.15m AOD
Comment:

Period: 1979–2000
Mean ann. range: 16.70m
Maximum ann. range: 30.00m
Minimum ann. range: 4.66m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	64.52	90.37	43
1996–97	64.99	76.5	92
1997–98	68.48	91.05	15
1998–99	68.44	91.05	
1999–2000	67.15	84.83	63

TQ35005 **Rose and Crown** H.A: 39
NGR: TQ M.A: EA Thames
EEC Unit: 22 Level: 87.81m AOD
Comment: No data 1947 to 1962.

Period: 1876–2000
Mean ann. range: 11.10m
Maximum ann. range: 23.30m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	66.07	86.61	65
1996–97	60.96	74.03	63
1997–98	60.84	80.93	17
1998–99	73.4	85.49	99
1999–2000	68.49	85.49	11

TQ38009B **Hackney Public Baths** H.A: 38
NGR: TQ M.A: EA Thames
EEC Unit: 7 Level: 16.8m AOD
Comment: Previously numbered TQ38/9 No data 1968–1973, 1996. Consistent rise in levels since records began in 1953, symptomatic of rising groundwater levels in London basin.

Period: 1953–2000
Mean ann. range: 0.61m
Maximum ann. range: 1.41m
Minimum ann. range: 0.16m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	−23.83	−23.5	
1996–97	−23.55	−23.0	
1997–98	−23.55	−22.8	
1998–99	−23.26	−22.6	
1999–2000	−22.93	−22.3	

TQ40045B **Blackcap Farm No. 2** H.A: 41
NGR: TQ M.A: EA Southern
EEC Unit: 21 Level: 39.85m AOD
Comment:

Period: 1970–2000
Mean ann. range: 1.28m
Maximum ann. range: 3.82m
Minimum ann. range: 0.21m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	0.1	4.79	72
1996–97	0.62	1.05	66
1997–98	0.71	4.79	
1998–99	0.78	4.79	12
1999–2000	0.76	2.44	49

					Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
TQ50007	**The Old Rectory Folkington**	H.A: 41						
NGR: TQ		M.A: EA Southern	**Period:** 1965–2000		1995–96	29.87	43.29	94
EEC Unit: 20	**Level:** 65.71m AOD		Mean ann. range:	6.58m	1996–97	31.56	36.2	59
Comment: No data 1973–1977.			Maximum ann. range:	13.20m	1997–98	32.07	41.07	15
			Minimum ann. range:	2.25m	1998–99	30.5	40.95	97
					1999–2000	30.5	38.66	10
TQ56019	**West Kingsdown**	H.A: 40						
NGR: TQ		M.A: EA Southern	**Period:** 1961–1998		1995–96	83.97	97.41	
EEC Unit: 23	**Level:** 129.57m AOD		Mean ann. range:	3.27m	1996–97	82.85	85.13	
Comment: Datum raised by 0.12m from 129.57 c. 1991. Logger installed. No significant seasonal fluctuations.			Maximum ann. range:	12.90m	1997–98	82.16	85.98	
			Minimum ann. range:	0.08m	1998–99	84.05	87.82	
					1999–2000	83.2	87.84	
TQ57118	**Thurrock A13**	H.A: 37						
NGR: TQ		M.A: EA Anglia	**Period:** 1979–1999		1995–96	−0.95	1.29	
EEC Unit: 48	**Level:** 20.78m AOD		Mean ann. range:	1.30m	1996–97	−0.95	0.21	
Comment: Intermittent data from 1995. No data after end 1999.			Maximum ann. range:	2.20m	1997–98	−0.11	0.17	
			Minimum ann. range:	0.19m	1998–99	−0.29	0.71	
					1999–2000	−0.43	0.71	
TQ58002	**Bush Pit Farm**	H.A: 37						
NGR: TQ		M.A: EA Thames	**Period:** 1967–2000		1995–96	−13.22	−11.9	
EEC Unit: 8	**Level:** 21.32m AOD		Mean ann. range:	0.70m	1996–97	−12.66	−11.9	
Comment: Previously numbered TQ58/2B. No data for 1974 and 1975. Dipped twice a year from 1998. Levels show consistent rise since monitoring began in late 1960s.			Maximum ann. range:	1.09m	1997–98	−12.66	−11.6	
			Minimum ann. range:	0.26m	1998–99	−12.28	−11.1	
					1999–2000	−12.62	−10.7	
TQ86044	**Little Pett Farm**	H.A: 40						
NGR: TQ		M.A: EA Southern	**Period:** 1982–2000		1995–96	25	37.91	
EEC Unit:	**Level:** 78.33m AOD		Mean ann. range:	3.72m	1996–97	22.6	28.39	
Comment: No data June '97 to Mar '98 as data suspect or borehole dry. Logger installed.			Maximum ann. range:	9.22m	1997–98	22.33	23.8	
			Minimum ann. range:	0.00m	1998–99	22.33	28.68	14
					1999–2000	24.13	28.68	73
TQ99011B	**Burnham-on-Crouch**	H.A: 37						
NGR: TQ		M.A: EA Anglia	**Period:** 1975–2000		1995–96	−18.03	−17.4	
EEC Unit: 47	**Level:** 15.29m AOD		Mean ann. range:	0.88m	1996–97	−17.56	−17.0	
Comment: Previously numbered TQ99/11. Borehole shows a consistent rise since records began in early 1970s.			Maximum ann. range:	2.75m	1997–98	−17.25	−16.6	
			Minimum ann. range:	0.44m	1998–99	−16.73	−13.5	
					1999–2000	−16.35	−15.6	
TR14009	**Little Bucket Farm**	H.A: 40						
NGR: TR 12254690		M.A: EA Southern	**Period:** 1971–2000		1995–96	58.3	86.56	44
EEC Unit:	**Level:** 87.33m AOD		Mean ann. range:	12.20m	1996–97	57	65.38	68
Comment: Index well. Logger installed. Unlikely to be affected by abstractions.			Maximum ann. range:	27.10m	1997–98	57.67	75.87	14
			Minimum ann. range:	1.38m	1998–99	62.07	78.3	13
					1999–2000	61.99	78.3	12
TR14050	**Glebe Cottage, Stowing**	H.A: 40						
NGR: TR 12654167		M.A: EA Southern	**Period:** 1970–2000		1995–96	92.82	97.86	
EEC Unit:	**Level:** 107.94m AOD		Mean ann. range:	3.14m	1996–97	92.76	94.5	
Comment: Logger installed. Lowest levels, recorded in 1971, maybe in error due to datum change.			Maximum ann. range:	11.20m	1997–98			
			Minimum ann. range:	0.61m	1998–99	94.27	96.98	
					1999–2000	94.27	96.98	
TR24036	**Church House**	H.A: 40						
NGR: TR 27874003		M.A: EA Southern	**Period:** 1971–2000		1995–96	31.6	35.69	
EEC Unit:	**Level:** 135.21m AOD		Mean ann. range:	8.38m	1996–97	31.34	32.46	
Comment: Logger installed			Maximum ann. range:	14.70m	1997–98	32.15	32.46	
			Minimum ann. range:	0.39m	1998–99	32.67	42.19	
					1999–2000	32.67	42.83	
TR36062	**Alland Grange**	H.A: 40						
NGR: TR 32086634		M.A: EA Southern	**Period:** 1969–2000		1995–96	1.31	5.68	
EEC Unit: 13	**Level:** 40.99m AOD		Mean ann. range:	1.67m	1996–97	2.32	3.31	
Comment: No data 1997,1998. Logger installed.			Maximum ann. range:	4.33m	1997–98	3.19	3.31	
			Minimum ann. range:	0.36m	1998–99	3.79	5.09	
					1999–2000	3.17	5.09	
TV59007C	**Westdean No.3**	H.A: 41						
NGR: TV 52909920		M.A: EA Southern	**Period:** 1940–2000		1995–96	1.15	4.76	27
EEC Unit: 19	**Level:** 13.48m AOD		Mean ann. range:	1.44m	1996–97	1.21	1.68	57
Comment: Index well			Maximum ann. range:	4.58m	1997–98	1.26	3.83	14
			Minimum ann. range:	0.32m	1998–99	1.35	3.83	11
					1999–2000	1.35	2.94	10

Aquifer: Upper Greensand

ST30007	**Lime Kiln Way**	H.A: 45						
NGR: ST 37630687		M.A: EA South West	**Period:** 1969–2000		1995–96	125.2	126.4	11
EEC Unit: 1	**Level:** 129.913m AOD		Mean ann. range:	0.78m	1996–97	125.3	126.2	20
Comment: Index well. Datum changed from 129.98 01/12/96.			Maximum ann. range:	2.08m	1997–98	124.8	125.9	12
			Minimum ann. range:	0.00m	1998–99	125.2	125.9	68
					1999–2000	125.3	125.9	81

Aquifer: Lower Greensand

SU82063	**Madams Farm**	H.A:						
NGR: SU 88862505		M.A: EA Southern	**Period:** 1984–2000		1995–96	107.6	108.1	22
EEC Unit:	**Level:** 143.64m AOD		Mean ann. range:	0.45m	1996–97	107.5	108.1	12
Comment: No data for 1994.			Maximum ann. range:	1.23m	1997–98	107.4	108.1	55
			Minimum ann. range:	0.10m	1998–99	107.4	108.0	10
					1999–2000	107.3	108.0	63

					Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
SU8408A	**Tilford Pumping Station**	H.A: 39						
NGR: SU 87164087		M.A: EA Thames	**Period:** 1971–1999		1995–96	55.15	56.59	52
EEC Unit: 21	Level: 67.92m AOD		Mean ann. range:	0.69m	1996–97	54	55.99	26
Comment: Borehole shows consistent long term tren of lowered water levels, possibly due to regional and local abstraction.			Maximum ann. range:	1.52m	1997–98	54	55.21	17
			Minimum ann. range:	0.11m	1998–99	54.75	55.87	15
					1999–2000	54.95	55.87	
TQ41082	**Lower Barn Farm**	H.A: 41						
NGR: TQ		M.A: EA Southern	**Period:** 1975–2000		1995–96	10.47	12.62	50
EEC Unit: 21	Level: 18.02m AOD		Mean ann. range:	0.74m	1996–97	10.28	10.81	12
Comment:			Maximum ann. range:	1.63m	1997–98	10.19	11.81	23
			Minimum ann. range:	0.04m	1998–99	10.84	11.81	87
					1999–2000	10.67	11.79	72
TR23032B	**Morehall Depot**	H.A: 40						
NGR: TR 20753650		M.A: EA Southern	**Period:** 1978–2000		1995–96	39.82	40.39	
EEC Unit: 15	Level: 51.35m AOD		Mean ann. range:	0.43m	1996–97	39.59	40.15	
Comment: Previously numbered TR23/32. No data for 1998. Logger installed.			Maximum ann. range:	1.87m	1997–98	39.52	40.15	
			Minimum ann. range:	0.00m	1998–99	40.31	40.55	
					1999–2000	40.15	40.55	

Aquifer: Hastings Beds

TQ2201	**The Bungalow, Lower Beeding**	H.A: 41						
NGR: TQ		M.A: EA Southern	**Period:** 1964–2000		1995–96	86.55	89.35	12
EEC Unit: 25	Level: 90.31m AOD		Mean ann. range:	1.99m	1996–97	86.97	89.13	11
Comment:			Maximum ann. range:	2.79m	1997–98	87.25	89.46	14
			Minimum ann. range:	0.79m	1998–99	86.96	89.3	10
					1999–2000	86.96	89.25	12
TQ42080A	**Kingstanding**	H.A: 40						
NGR: TQ		M.A: EA Southern	**Period:** 1979–2000		1995–96	171.8	182.6	88
EEC Unit:	Level: 203.28m AOD		Mean ann. range:	6.51m	1996–97	169.6	179.9	15
Comment: Logger installed.			Maximum ann. range:	10.90m	1997–98	172.8	183.4	13
			Minimum ann. range:	2.46m	1998–99	174.2	183.4	97
					1999–2000	173.6	181.5	13
TQ61044	**Dallington Herrings Farm**	H.A: 41						
NGR: TQ		M.A: EA Southern	**Period:** 1964–2000		1995–96	114.1	118.7	14
EEC Unit: 18	Level: 120.37m AOD		Mean ann. range:	3.23m	1996–97	113.3	118.7	22
Comment: No data 1973 to 1978.			Maximum ann. range:	6.67m	1997–98	115.2	118.9	23
			Minimum ann. range:	0.99m	1998–99	115.0	118.8	14
					1999–2000	114.8	118.5	13
TQ62099	**Whitecaks, Heathfield**	H.A: 40						
NGR: TQ		M.A: EA Southern	**Period:** 1978–2000		1995–96	136.6	139.3	
EEC Unit:	Level: 155.28m AOD		Mean ann. range:	3.40m	1996–97	136.5	139.9	
Comment: Logger installed. Renamed Ticehurst Grange by EA. Borehole influenced by abstraction - calculation of Mean annual Recharge unreliable.			Maximum ann. range:	9.21m	1997–98	136.7	141.2	
			Minimum ann. range:	1.03m	1998–99	136.7	145.1	
					1999–2000	136.7	145.1	
TQ71123	**Red House**	H.A: 40						
NGR: TQ		M.A: EA Southern	**Period:** 1974–2000		1995–96	25.12	27.47	
EEC Unit: 16	Level: 40.02m AOD		Mean ann. range:	3.80m	1996–97	24.81	28.14	15
Comment: No data June '94 to Feb '96. Logger installed.			Maximum ann. range:	5.55m	1997–98	24.75	29.77	15
			Minimum ann. range:	1.22m	1998–99	25.48	29.08	11
					1999–2000	25.48	28.52	11

Aquifer: Upper Jurassic

SE68022E	**Kirbymoorside**	H.A: 27						
NGR: SE 68908590		M.A: EA North East	**Period:** 1975–1998		1995–96	37.75	40.02	63
EEC Unit: 25	Level: 46.04m AOD		Mean ann. range:	2.24m	1996–97	37.73	39.57	40
Comment: Previously numbered SE68/16. No data after December 1998.			Maximum ann. range:	3.77m	1997–98	37.89	40.84	14
			Minimum ann. range:	0.92m	1998–99	37.98	40.84	
					1999–2000			
SE77076	**Broughton**	H.A: 27						
NGR: SE 76907300		M.A: EA North East	**Period:** 1975–2000		1995–96	15.61	20.09	10
EEC Unit: 25	Level: 33.51m AOD		Mean ann. range:	3.32m	1996–97	15.46	18.78	50
Comment:			Maximum ann. range:	5.63m	1997–98	15.73	20.1	12
			Minimum ann. range:	1.24m	1998–99	16.13	20.49	10
					1999–2000	16.21	20.49	90
SE98023	**Seavegate Gill**	H.A: 27						
NGR: SE 98938567		M.A: EA North East	**Period:** 1980–2000		1995–96	32.05	34.39	
EEC Unit: 27	Level: 38.09m AOD		Mean ann. range:	2.02m	1996–97			
Comment: Replaced SE98/19 in 1994. Logger installed. No data 1996–1997.			Maximum ann. range:	3.15m	1997–98	32.74	35.86	
			Minimum ann. range:	0.80m	1998–99	32.38	35.86	10
					1999–2000	32.31	35.54	14
SU49075B	**Marcham**	H.A: 39						
NGR: SU 46519736		M.A: EA Thames	**Period:** 1988–2000		1995–96	58.52	59.4	90
EEC Unit: 11	Level: 59.65m AOD		Mean ann. range:	0.59m	1996–97	58.36	59.09	65
Comment: No data July–December 1993.			Maximum ann. range:	1.02m	1997–98	58.35	58.91	11
			Minimum ann. range:	0.28m	1998–99	58.47	59.2	13
					1999–2000	58.5	59.22	16

Aquifer: Middle Jurassic

					Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
SP00062	**Ampney Crucis**	H.A: 39						
NGR: SP 05950190		M.A: EA Thames	**Period:** 1958–2000		1995–96	99.14	103.1	99
EEC Unit: 9	Level: 109.54m AOD		Mean ann. range:	3.68m	1996–97	99.15	102.8	12
Comment: Index well. Telemetry site. Borehole highly responsive.			Maximum ann. range:	6.45m	1997–98	99.8	103.1	11
			Minimum ann. range:	0.96m	1998–99	99.75	103.0	10
					1999–2000	99.95	103.0	85
SP20113	**Alvescot Road Obs.**	H.A: 39						
NGR: SP 27210634		M.A: EA Thames	**Period:** 1983–2000		1995–96	81.31	91.06	
EEC Unit: 9	Level: 86.31m AOD		Mean ann. range:	3.35m	1996–97			
Comment: No data for 1996, 1997.			Maximum ann. range:	5.17m	1997–98	83.92	87.96	
			Minimum ann. range:	1.00m	1998–99	82.91	87.96	27
					1999–2000	82.59	85	83
ST51057	**Over Compton**	H.A: 52						
NGR: ST 59101690		M.A: EA South West	**Period:** 1971–2000		1995–96	55.88	59.39	10
EEC Unit: 6	Level: 67.24m AOD		Mean ann. range:	2.71m	1996–97	55.6	58.8	51
Comment: Good reliable data and representative of natural conditions.			Maximum ann. range:	4.33m	1997–98	55.52	58.69	12
			Minimum ann. range:	0.56m	1998–99	55.88	58.69	98
					1999–2000	55.95	58.84	10
ST88062A	**Didmarton 1**	H.A: 53						
NGR: ST 82758743		M.A: EA South West	**Period:** 1977–2000		1995–96	60.4	95.23	15
EEC Unit: 7	Level: 113.88m AOD		Mean ann. range:	18.80m	1996–97	66.49	89.86	10
Comment: Good reliable data and representative of natural conditions.			Maximum ann. range:	28.90m	1997–98	66.27	92.85	13
			Minimum ann. range:	8.53m	1998–99	71.34	94.65	11
					1999–2000	80.98	94.65	50

Aquifer: Lincolnshire Limestone

SK97025	**Grange De Lings**	H.A: 30						
NGR: SK 98007817		M.A: EA Anglia	**Period:** 1975–2000		1995–96	38.22	42.12	14
EEC Unit: 1	Level: 48.21m AOD		Mean ann. range:	3.38m	1996–97	39.14	42.1	13
Comment: Manually dipped. Reliable data.			Maximum ann. range:	5.07m	1997–98	39.69	43.11	99
			Minimum ann. range:	2.01m	1998–99	39.77	42.41	99
					1999–2000	39.6	42.71	74
TF03037	**New Red Lion**	H.A: 30						
NGR: TF 08853034		M.A: EA Anglia	**Period:** 1964–2000		1995–96	7.44	20.82	88
EEC Unit: 3	Level: 33.98m AOD		Mean ann. range:	8.46m	1996–97	5.09	15.1	12
Comment: Index well. Telemetry removed in 1998. Reliable data. Not affected by abstraction.			Maximum ann. range:	19.20m	1997–98	6.54	20.37	12
			Minimum ann. range:	0.00m	1998–99	11.58	21.21	12
					1999–2000	11.57	21.21	72
TF04014	**Silk Willoughby**	H.A: 30						
NGR: TF 04294273		M.A: EA Anglia	**Period:** 1972–2000		1995–96	11.29	21.01	92
EEC Unit: 2	Level: 34.29m AOD		Mean ann. range:	6.08m	1996–97	9.13	16.93	11
Comment: Manually dipped. Reliable data.			Maximum ann. range:	16.40m	1997–98	11.38	20.74	98
			Minimum ann. range:	0.00m	1998–99	14.62	21.11	96
					1999–2000	14.78	21.11	70
TF06047	**Stow No. 2**	H.A: 30						
NGR: TF 04726938		M.A: EA Anglia	**Period:** 1972–2000		1995–96	1.87	9.72	84
EEC Unit: 2	Level: 7.49m AOD		Mean ann. range:	6.03m	1996–97	1.58	7.85	10
Comment: Manually dipped. Reliable data.			Maximum ann. range:	9.31m	1997–98	3.82	9.52	87
			Minimum ann. range:	1.83m	1998–99	3.6	9.62	10
					1999–2000	3.91	9.62	93

Aquifer: Permo-Triassic Sandstones

IJ26001	**Dunmurry**	H.A: 205						
NGR: IJ 29136950		M.A: DOE Northern Ireland	**Period:** 1985–2000		1995–96	27.27	28.03	
EEC Unit: 6	Level: 31.31m AOD		Mean ann. range:	1.27m	1996–97			
Comment: Replaced IJ26/2 Good representative site with no known artificial influences.			Maximum ann. range:	2.11m	1997–98	28.17	28.76	
			Minimum ann. range:	0.33m	1998–99	27.37	28.78	24
					1999–2000	27.33	28.11	78
NX97001	**Redbank**	H.A: 79						
NGR: NX		M.A: Scottish EPA	**Period:** 1981–2000		1995–96	7.14	8.6	71
EEC Unit: 14	Level: 13.52m AOD		Mean ann. range:	1.14m	1996–97	7.15	8.25	86
Comment: Index well.			Maximum ann. range:	1.63m	1997–98	7.13	8.25	82
			Minimum ann. range:	0.80m	1998–99	7.19	8.22	67
					1999–2000	7.19	8.45	10
NY00328	**Brownbank Layby**	H.A: 74						
NGR: NY		M.A: EA North West	**Period:** 1976–1999		1995–96	23.76	24.87	35
EEC Unit: 17	Level: 30.49m AOD		Mean ann. range:	0.59m	1996–97	23.22	24.36	57
Comment: No data for 1997 and 1998.			Maximum ann. range:	1.43m	1997–98	23.02	23.94	
			Minimum ann. range:	1.88m	1998–99	23.57	24.69	
					1999–2000	24.07	24.69	
NY14004	**New Cowper**	H.A: 75						
NGR: NY		M.A: EA North West	**Period:** 1989–2000		1995–96	11.66	12.77	62
EEC Unit: 20	Level: 14.05m AOD		Mean ann. range:	0.53m	1996–97	11.61	12.32	88
Comment: Limited seasonal fluctuations, Mean Annual Recharge figures unreliable.			Maximum ann. range:	1.24m	1997–98	11.21	12.4	
			Minimum ann. range:	0.16m	1998–99	11.95	12.87	13
					1999–2000	11.56	12.98	24
NY45016	**Corby Hill**	H.A: 76						
NGR: NY		M.A: EA North West	**Period:** 1977–1996		1995–96	49.87	50.84	
EEC Unit: 20	Level: 51.46m AOD		Mean ann. range:	0.52m	1996–97	49.73	50.17	
Comment: Removed from network in 1996.			Maximum ann. range:	0.96m	1997–98			
			Minimum ann. range:	0.07m	1998–99			
					1999–2000			

NY63002 **Skirwith** H.A: 76
NGR: NY M.A: EA North West
EEC Unit: 20 Level: 133.25m AOD
Comment: Index well. Barometric pressure effects have been observed which can cause variations in the water level of up to 0.3m. No data March 2001–February 2002.

Period: 1978–2000
Mean ann. range: 0.81m
Maximum ann. range: 1.44m
Minimum ann. range: 0.20m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	129.6	131.7	25
1996–97	129.3	130.1	80
1997–98	129.3	130.2	11
1998–99	129.9	131.0	13
1999–2000	130	131.0	12

NZ41034 **Northern Dairies** H.A: 25
NGR: NZ 48611835 M.A: EA North East
EEC Unit: 10 Level: 9.6m AOD
Comment:

Period: 1974–2000
Mean ann. range: 0.70m
Maximum ann. range: 2.63m
Minimum ann. range: 0.05m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	0.2	0.63	
1996–97	0.28	0.66	45
1997–98	0.42	0.75	56
1998–99	−0.07	1.15	84
1999–2000	−0.07	1.31	82

SD27006B **Furness Abbey** H.A: 74
NGR: SD 21727171 M.A: EA North West
EEC Unit: 16 Level: 19.31m AOD
Comment: Previously numbered SD27/8

Period: 1972–2000
Mean ann. range: 3.28m
Maximum ann. range: 5.14m
Minimum ann. range: 1.54m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	9.84	10.65	
1996–97	9.4	12.52	77
1997–98	10.2	13.57	10
1998–99	11.46	14.26	45
1999–2000	11.29	14.26	75

SD400137 **Moor Hall** H.A: 69
NGR: SD 41280521 M.A: EA North West
EEC Unit: 10 Level: 48.14m AOD
Comment: Borehole has shown consistent rising trend since monitoring began in 1983. No data January–June 1998.

Period: 1983–2000
Mean ann. range: 0.68m
Maximum ann. range: 1.20m
Minimum ann. range: 0.30m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	22.17	23.13	15
1996–97	22.53	23.07	49
1997–98	22.31	22.8	38
1998–99	22.28	23.08	
1999–2000	22.37	23.2	83

SD41032 **Yew Tree Farm** H.A: 70
NGR: SD 44001164 M.A: EA North West
EEC Unit: 10 Level: 23.69m AOD
Comment: Index well. Well shows very subdued seasonal fluctuation. Early data in 1972 possibly affected by local pumping.

Period: 1972–2000
Mean ann. range: 0.64m
Maximum ann. range: 4.08m
Minimum ann. range: 0.23m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	12.67	14.01	
1996–97	12.93	13.6	
1997–98	13.39	13.88	
1998–99	13.54	13.95	
1999–2000	13.54	14.11	

SD44015 **Moss Edge Farm** H.A: 72
NGR: SD 43964928 M.A: EA North West
EEC Unit: 13 Level: 4.99m AOD
Comment:

Period: 1961–2000
Mean ann. range: 1.20m
Maximum ann. range: 4.19m
Minimum ann. range: 0.26m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	2.1	3.88	56
1996–97	2.17	3.05	62
1997–98	2.3	3.33	86
1998–99	2.83	4.07	12
1999–2000	3.2	4.53	57

SD53025 **Red Scar Wood** H.A: 72
NGR: SD 58603133 M.A: EA North West
EEC Unit: 13 Level: 15.77m AOD
Comment: Borehole behaviour changes after 1999, possibly due to local influences.

Period: 1989–2000
Mean ann. range: 1.70m
Maximum ann. range: 2.38m
Minimum ann. range: 0.42m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	9.29	12.14	10
1996–97	9.35	10.84	60
1997–98	10.19	11.48	
1998–99	10.19	11.48	
1999–2000	8.55	15.52	

SE36047 **Kelly's Café** H.A: 27
NGR: SE 39456575 M.A: EA North East
EEC Unit: 21 Level: 24.75m AOD
Comment: Added 1985.

Period: 1981–2000
Mean ann. range: 0.31m
Maximum ann. range: 0.70m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	18.93	19.62	29
1996–97	18.53	19.23	4
1997–98	18.41	19.18	22
1998–99	18.7	19.37	10
1999–2000	19.13	19.46	76

SE39020B **Scruton Village** H.A: 27
NGR: SE 30049244 M.A: EA North East
EEC Unit: 23 Level: 34.69m AOD
Comment:

Period: 1969–2000
Mean ann. range: 0.37m
Maximum ann. range: 1.01m
Minimum ann. range: 0.02m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	26.64	27.7	67
1996–97	26.4	27	35
1997–98	26.4	27.07	17
1998–99	26.76	27.3	98
1999–2000	26.88	27.3	85

SE45003 **Cattal Maltings** H.A: 27
NGR: SE 44705580 M.A: EA North East
EEC Unit: 21 Level: 30.86m AOD
Comment:

Period: 1969–2000
Mean ann. range: 0.52m
Maximum ann. range: 1.59m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	25.38	26.46	35
1996–97	25.27	25.77	23
1997–98	25.24	26.11	15
1998–99	25.65	26.18	64
1999–2000	25.79	26.18	60

SE52004 **Southfield Lane** H.A: 27
NGR: SE 54732363 M.A: EA North East
EEC Unit: 18 Level: 18.1m AOD
Comment: No data for 1996,1997. Logger installed 2002.

Period: 1955–2000
Mean ann. range: 0.68m
Maximum ann. range: 3.37m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	9	10.25	
1996–97			
1997–98	9.27	9.95	
1998–99	9.27	10.1	
1999–2000	9.7	10.15	

SE54032A **Bilborough** H.A: 27
NGR: SE 53324646 M.A: EA North East
EEC Unit: 20 Level: 45.52m AOD
Comment: No data for 1996,1997 Logger installed. Borehole with minimal seasonal fluctuations. Not possible to calculate Mean annual Recharge.

Period: 1984–2000
Mean ann. range: 0.27m
Maximum ann. range: 0.52m
Minimum ann. range: 0.08m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	9.74	11.18	
1996–97			
1997–98	9.62	10.72	
1998–99	9.62	10.87	
1999–2000	10.6	11.01	

SE60076 **Woodhouse Grange** H.A: 28
NGR: SE 67840709 M.A: EA Midlands
EEC Unit: 3 Level: 4.35m AOD
Comment: Replaced SE60/24 in 1981. Shows natural seasonal variation in water levels.

Period: 1980–2001
Mean ann. range: 0.41m
Maximum ann. range: 0.76m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	−1.05	−0.17	
1996–97	−1.05	−0.65	48
1997–98	−0.99	−0.44	12
1998–99	−0.99	0.07	15
1999–2000	−0.45	0.13	86

SE61011 **Sykehouse** H.A:
NGR: SE 62701710 M.A: EA North East
EEC Unit: Level: 4.77m AOD
Comment: Logger installed.

Period: 1971–2000
Mean ann. range: 0.52m
Maximum ann. range: 1.03m
Minimum ann. range: 0.05m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	−1.49	−0.41	39
1996–97	−1.61	−1.07	10
1997–98	−1.58	−0.88	13
1998–99	−1.35	−0.73	10
1999–2000	−1.05	−0.51	95

SE83009 **Holme-on-Spalding Moor** H.A: 26
NGR: SE 80403640 M.A: EA North East
EEC Unit: 34 Level: 5m AOD
Comment: No data 1982, 1983, 1984.

Period: 1974–2000
Mean ann. range: 0.45m
Maximum ann. range: 1.13m
Minimum ann. range: 0.10m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	−0.83	0.14	97
1996–97	−1.05	−0.36	11
1997–98	−0.75	0	13
1998–99	−0.32	0.29	11
1999–2000	−0.07	0.3	78

SJ15013 Llanfair D.C H.A: 66
NGR: SJ 13745556 M.A: EA Wales
EEC Unit: 13 Level: 83.08m AOD
Comment: Index well. Previously numbered SJ15/15. Good reliable data. Unlikely to be affected by abstractions.

Period: 1972–2001
Mean ann. range: 0.75m
Maximum ann. range: 1.31m
Minimum ann. range: 0.08m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	78.81	80.42	11
1996–97	78.67	79.56	16
1997–98	78.7	79.69	14
1998–99	79.18	80.07	12
1999–2000	79.51	80.39	13

SJ33039 Eastwick Farm H.A: 67
NGR: SJ 38143831 M.A: EA Wales
EEC Unit: 14 Level: 74.57m AOD
Comment: Influenced by pumping from abstraction borehole.

Period: 1974–2000
Mean ann. range: 0.23m
Maximum ann. range: 0.47m
Minimum ann. range: 0.02m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	67.22	67.53	13
1996–97	67.15	67.5	70
1997–98	67.15	67.3	93
1998–99	67.07	67.31	17
1999–2000	67.07	67.44	22

SJ56045E Ashton No 4 H.A: 68
NGR: SJ 50426953 M.A: EA North West
EEC Unit: 4 Level: 37.26m AOD
Comment: No data for Apr 1995 to Nov 1996. Borehole showing some influence from pumping. Not possible to calculate Mean Annual Recharge.

Period: 1970–2000
Mean ann. range: 1.57m
Maximum ann. range: 4.70m
Minimum ann. range: 0.25m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	21.47	21.67	
1996–97	21.83	22.07	
1997–98	21.93	22.42	23
1998–99	22.18	23.11	45
1999–2000	22.67	23.67	31

SJ590147 Sandy Lane H.A: 69
NGR: SJ 59509782 M.A: EA North West
EEC Unit: 11 Level: 40.06m AOD
Comment: No data for May 85 to Apr 91, June 99 to July 2000. Borehole appears to be affected by regional abstractions.

Period: 1971–1999
Mean ann. range: 1.03m
Maximum ann. range: 1.92m
Minimum ann. range: 9.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	32.09	35.33	
1996–97	31.81	33.44	24
1997–98	31.74	32.98	11
1998–99	31.95	34.72	17
1999–2000	33.74	35.13	

SJ620112 Heathlanes H.A: 54
NGR: SJ 61952105 M.A: EA Midlands
EEC Unit: 9 Level: 68.61m AOD
Comment: Index well. Hydrograph shows groundwater system responsive to seasonal recharge and natural seasonal variation and is not affected by the Shropshire Groundwater Scheme.

Period: 1996–2000
Mean ann. range: 0.49m
Maximum ann. range: 1.42m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	61.45	62.78	0
1996–97	60.53	61.91	0
1997–98	60.22	61.25	20
1998–99	60.31	61.78	15
1999–2000	61.31	62.56	16

SJ690138 Kenyon Lane H.A: 69
NGR: SJ 63119620 M.A: EA North West
EEC Unit: 9 Level: 40.23m AOD
Comment: Borehole shows influence of regional pumping, with distinct lowering of levels during 1970s.

Period: 1968–2000
Mean ann. range: 0.31m
Maximum ann. range: 0.82m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	−8.33	−7.66	
1996–97	−8.33	−7.72	
1997–98	−7.96	−7.34	
1998–99	−7.39	−5.92	
1999–2000	−6.85	−4.42	

SJ83001A Stone H.A: 28
NGR: SJ 89693474 M.A: EA Midlands
EEC Unit: 9 Level: 102.62m AOD
Comment: Hydrograph shows an open groundwater system very responsive to seasonal recharge and natural variations.

Period: 1974–2000
Mean ann. range: 0.96m
Maximum ann. range: 1.80m
Minimum ann. range: 0.20m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	89.6	91.47	21
1996–97	89.34	89.95	66
1997–98	89.54	90.69	98
1998–99	89.79	90.99	11
1999–2000	90.24	91.2	80

SJ87032 Dale Brow H.A: 68
NGR: SJ 89697598 M.A: EA North West
EEC Unit: 8 Level: 138.66m AOD
Comment: No data for Feb 1995 to June 1996.

Period: 1973–2000
Mean ann. range: 1.08m
Maximum ann. range: 1.88m
Minimum ann. range: 5.76m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	94.37	96.94	
1996–97	94.34	95.78	13
1997–98	95.13	96.61	13
1998–99	95.75	96.9	11
1999–2000	95.99	96.93	79

SJ88093 Bruntwood Hall H.A: 69
NGR: SJ 86118645 M.A: EA North West
EEC Unit: 8 Level: 62.56m AOD
Comment:

Period: 1976–2000
Mean ann. range: 0.77m
Maximum ann. range: 2.83m
Minimum ann. range: 0.24m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	48.28	48.83	34
1996–97	48.04	48.71	
1997–98	48.04	48.35	56
1998–99	48.18	48.77	
1999–2000	48.3	48.91	63

SK00041 Nuthall Farm H.A: 28
NGR: SK 06700120 M.A: EA Midlands
EEC Unit: 10 Level: 141.79m AOD
Comment: Index well. Groundwater system responsive to seasonal recharge, but limited inter-annual fluctuation.

Period: 1974–2000
Mean ann. range: 0.56m
Maximum ann. range: 1.65m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	129.1	130.6	
1996–97	128.1	129.9	
1997–98	128.1	128.9	
1998–99	128.1	130.3	
1999–2000	129.7	131.0	

SK10009 Wesford Flats H.A: 28
NGR: SK 14400464 M.A: EA Midlands
EEC Unit: Level: 96.21m AOD
Comment: Index well. Hydrograph shows an open groundwater system responsive to to seasonal recharge. Dry during 1976, 1992 and 1998–1999.

Period: 1966–2000
Mean ann. range: 0.51m
Maximum ann. range: 1.50m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	88.73	90.71	
1996–97	88.61	89.83	0
1997–98	88.61	88.61	0
1998–99	88.61	89.71	20
1999–2000	88.61	90.11	13

SK21111 Grangewood H.A: 28
NGR: SK 27311419 M.A: EA Midlands
EEC Unit: 8 Level: 98.03m AOD
Comment: Hydrograph shows an open groundwater system responsive to seasonal recharge.

Period: 1967–2000
Mean ann. range: 1.31m
Maximum ann. range: 2.86m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	88.24	92.08	0
1996–97	87.13	89.18	0
1997–98	87	89	15
1998–99	88.13	91.25	21
1999–2000	89.4	91.25	91

SK24022 Burtonshuts Farm H.A: 28
NGR: SK 25394431 M.A: EA Midlands
EEC Unit: 2 Level: 154.84m AOD
Comment: Hydrograph shows an open groundwater system responsive to seasonal variation.

Period: 1972–2000
Mean ann. range: 0.65m
Maximum ann. range: 2.09m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	135.8	138.0	0
1996–97	135.1	136.8	18
1997–98	135.1	136.5	20
1998–99	135.9	137.5	16
1999–2000	136.6	137.5	19

SK56053 Peafield Lane H.A: 28
NGR: SK 56326440 M.A: EA Midlands
EEC Unit: 5 Level: 112.97m AOD
Comment: Hydrograph shows minimal seasonal response to recharge but there are long term cycles of recession and recovery superimposed on a gradual decline and influenced by abstraction.

Period: 1969–2000
Mean ann. range: 0.34m
Maximum ann. range: 1.68m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	77.59	78.57	35
1996–97	76.34	78.35	0
1997–98	76.06	76.94	22
1998–99	76.06	76.83	18
1999–2000	76.56	77.02	60

SK67017 Morris Dancers H.A: 28
NGR: SK 64487257 M.A: EA Midlands
EEC Unit: Level: 54.83m AOD
Comment: Index well. Possible delayed recharge occurring but hydrograph indicates long term decline in groundwater level due to overabstraction from the aquifer. Not possible to calculate Mean Annual Recharge.

Period: 1969–2000
Mean ann. range: 0.16m
Maximum ann. range: 0.55m
Minimum ann. range: 0.00m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	32.33	32.69	
1996–97	31.88	32.69	
1997–98	31.58	32.17	
1998–99	31.4	31.69	
1999–2000	31.4	31.75	

				Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
SK68021	**Crossley Hill Wood**	H.A: 28					
NGR: SK 61008374		M.A: EA Midlands	**Period:** 1969–2000	1995–96	25.55	26.01	
EEC Unit: 4	Level: 52.37m AOD		Mean ann. range: 0.21m	1996–97	25	25.97	0
Comment: Hydrograph shows some seasonal response to recharge but dominant trend is long term decline in water level commencing early 1970's. Influenced by abstraction.			Maximum ann. range: 0.94m	1997–98	24.87	25.23	
			Minimum ann. range: 0.00m	1998–99	24.85	25.31	19
				1999–2000	25.03	25.44	64
SK73050	**Woodland Farm**	H.A: 28					
NGR: SK 76933228		M.A: EA Midlands	**Period:** 1980–1998	1995–96	15.73	16.76	
EEC Unit: 6	Level: 56.66m AOD		Mean ann. range: 0.59m	1996–97	15.16	16.11	
Comment: Hydrograph shows an 8 year lag in response to the 1976 drought followed by recovery. Layered and confined aquifer. Some data missing mid 1995 and late 1997. Removed 1998.			Maximum ann. range: 1.41m	1997–98	15.16	15.85	
			Minimum ann. range: 0.09m	1998–99	15.79	15.85	
				1999–2000			
SO71018	**Stores Cottage**	H.A: 54					
NGR: SO 71701970		M.A: EA Midlands	**Period:** 1973–2000	1995–96	61.55	65.59	99
EEC Unit: 16	Level: 66.4m AOD		Mean ann. range: 3.44m	1996–97	61.46	64.56	11
Comment: Borehole shows natural seasonal variation.			Maximum ann. range: 5.69m	1997–98	62.11	65.2	
			Minimum ann. range: 1.62m	1998–99	61.82	65.2	85
				1999–2000	62.49	65.38	77
SO87028	**Hillfields**	H.A: 54					
NGR: SO 81607970		M.A: EA Midlands	**Period:** 1961–2000	1995–96	72.9	74.27	
EEC Unit: 14	Level: 97.66m AOD		Mean ann. range: 0.69m	1996–97	72.52	73.62	10
Comment: No data 1968–1972. Borehole responds with natural seasonal variations. Aquifer probably confined by marl horizons within the sandstone.			Maximum ann. range: 2.17m	1997–98	72.44	73.4	13
			Minimum ann. range: 0.05m	1998–99	72.67	73.84	11
				1999–2000	73.17	73.86	70
SX99037B	**Bussels No.7A**	H.A: 45					
NGR: SX 95289872		M.A: EA South West	**Period:** 1971–2000	1995–96	23.43	24.99	10
EEC Unit: 1	Level: 27.016m AOD		Mean ann. range: 1.06m	1996–97	23.4	24.58	50
Comment: Index well. Datum changed from 26.97 20/01/00.			Maximum ann. range: 2.36m	1997–98	23.33	24.77	13
			Minimum ann. range: 0.12m	1998–99	23.56	24.77	95
				1999–2000	23.83	25.06	12
SY09021A	**Heathlands**	H.A: 45					
NGR: SY 06659235		M.A: EA South West	**Period:** 1968–1999	1995–96	91.85	93.24	12
EEC Unit: 1	Level: 102.805m AOD		Mean ann. range: 1.30m	1996–97	91.26	93.24	54
Comment: No data for Jan '60 to Mar '68,Jan '83 to June '84 Datum changed from 102.76 10/06/02.			Maximum ann. range: 2.39m	1997–98	91.26	93.15	15
			Minimum ann. range: 0.29m	1998–99	91.61	93.04	78
				1999–2000	91.70	92.99	13

Aquifer: Magnesian Limestone

				Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
NZ21029	**Swan House**	H.A: 25					
NGR: NZ 25211995		M.A: EA North East	**Period:** 1969–1999	1995–96	81.19	87.88	86
EEC Unit:	Level: 94.9m AOD		Mean ann. range: 4.85m	1996–97	80.57	85.46	57
Comment: Index well, replaced NZ22/22 July 2001.			Maximum ann. range: 9.74m	1997–98	80.28	86.9	12
			Minimum ann. range: 0.80m	1998–99	82.75	86.9	78
				1999–2000	81.87	86.9	72
NZ22022	**Rushyford NE**	H.A: 25					
NGR: NZ 28752896		M.A: EA North East	**Period:** 1968–2000	1995–96	75.61	76.74	
EEC Unit: 10	Level: 92.65m AOD		Mean ann. range: 1.01m	1996–97	75.61	76.4	
Comment: Replaced as Index by NZ21/29 - mine water pumping. Well shows no significant seasonal variation.			Maximum ann. range: 5.86m	1997–98	75.49	76.92	
			Minimum ann. range: 0.00m	1998–99	76.31	77.1	
				1999–2000	76.39	77.1	
NZ32019	**Heley House (NRA K)**	H.A: 25					
NGR: NZ 35752650		M.A: EA North East	**Period:** 1985–2000	1995–96	37.43	43.18	
EEC Unit: 10	Level: 81.49m AOD		Mean ann. range: 4.29m	1996–97	36.21	43.65	15
Comment: Borehole shows significant short term influences, making Mean Annual Recharge figures suspect.			Maximum ann. range: 12.70m	1997–98	36.21	43.43	18
			Minimum ann. range: 0.28m	1998–99	36.37	43.14	20
				1999–2000	38.07	44.6	92
NZ33020	**Garmondsway**	H.A: 24					
NGR: NZ 33493501		M.A: EA North East	**Period:** 1974–1999	1995–96	75.97	83	95
EEC Unit: 7	Level: 102.49m AOD		Mean ann. range: 6.71m	1996–97	75.73	82.17	75
Comment: No data 1988			Maximum ann. range: 13.80m	1997–98	75.85	84.12	14
			Minimum ann. range: 0.73m	1998–99	79.3	85.96	11
				1999–2000	78.85	85.96	11
SE35004	**Castle Farm**	H.A: 27					
NGR: SE 38305830		M.A: EA North East	**Period:** 1970–2000	1995–96	36.03	36.87	
EEC Unit: 21	Level: 44.15m AOD		Mean ann. range: 0.63m	1996–97			
Comment: No data for 1996, 1997.			Maximum ann. range: 1.46m	1997–98	36.06	36.53	
			Minimum ann. range: 0.04m	1998–99	36.06	36.56	43
				1999–2000	36.2	36.66	61
SE43009	**Peggy Ellerton**	H.A: 27					
NGR: SE 45353964		M.A: EA North East	**Period:** 1968–2000	1995–96	32.92	34.78	28
EEC Unit: 20	Level: 51.4m AOD		Mean ann. range: 1.26m	1996–97	31.74	34.02	11
Comment: Index well.			Maximum ann. range: 3.59m	1997–98	31.68	35.06	
			Minimum ann. range: 0.00m	1998–99	33.9	36.56	16
				1999–2000	35.87	36.97	49
SE43014	**Coldhill Farm No. 35**	H.A: 27					
NGR: SE 46603550		M.A: EA North East	**Period:** 1971–2000	1995–96	33.67	34.56	87
EEC Unit: 24	Level: 37.89m AOD		Mean ann. range: 0.59m	1996–97	33.62	34.38	14
Comment: Logger installed.			Maximum ann. range: 0.94m	1997–98	34.01	34.42	55
			Minimum ann. range: 0.24m	1998–99	33.88	34.38	62
				1999–2000	33.83	34.38	11
SE51002	**Westfield Farm**	H.A: 27					
NGR: SE 52101530		M.A: EA North East	**Period:** 1971–2000	1995–96	11.45	13.43	32
EEC Unit: 9	Level: 30m AOD		Mean ann. range: 1.00m	1996–97	10.51	12.28	19
Comment: Possible datum change between 1970s and 1980s data.			Maximum ann. range: 3.21m	1997–98	10.51	12.27	15
			Minimum ann. range: 0.03m	1998–99	11.18	12.55	12
				1999–2000	10.95	12.61	11

SK46071 Stanton Hill H.A: 28
NGR: SK 48006030 M.A: EA Midlands
EEC Unit: 5 Level: 176.31m AOD
Comment: Responds to natural seasonal variation.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1973–2000		1995–96	167.4	169.1	85
Mean ann. range:	1.67m	1996–97	167.4	169.0	11
Maximum ann. range:	3.06m	1997–98	167.9	169.3	89
Minimum ann. range:	0.29m	1998–99	167.8	169.4	11
		1999–2000	167.8	169.0	10

SK58043 Southards Lane H.A: 28
NGR: SK 52488018 M.A: EA Midlands
EEC Unit: 4 Level: 98.43m AOD
Comment: No data March - December 1990. Borehole backfilled from 411m so may have connections to deeper groundwater units. Hydrograph shows an open groundwater system responsive to seasonal recharge.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1973–2000		1995–96	82.41	92.61	35
Mean ann. range:	6.03m	1996–97	82.07	85.92	60
Maximum ann. range:	14.30m	1997–98	82.59	88.03	83
Minimum ann. range:	0.00m	1998–99	82.8	89.44	13
		1999–2000	82.46	89.04	83

Aquifer: Coal Measures

SE23004 Silver Blades Ice Rink H.A: 27
NGR: SE 28503414 M.A: EA North East
EEC Unit: 17 Level: 31.24m AOD
Comment: Borehole shows significant increases in level since monitoring began in early 1970s, possibly in response to changes in local abstraction regime, but levels stabilised during the 1990s.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1971–2000		1995–96	28.54	29.12	
Mean ann. range:	0.49m	1996–97			
Maximum ann. range:	1.38m	1997–98	28.4	28.59	
Minimum ann. range:	0.12m	1998–99	28.32	28.59	
		1999–2000	28.26	28.58	

Aquifer: Millstone Grit

SE02046 Thrum Farm H.A: 27
NGR: SE 07712528 M.A: EA North East
EEC Unit: Level: 228.23m AOD
Comment: No data 1996 - 1997. Logger installed.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1977–1999		1995–96	193.4	198.0	
Mean ann. range:	4.32m	1996–97			
Maximum ann. range:	8.75m	1997–98	195.1	198.6	
Minimum ann. range:	0.51m	1998–99	194.5	198.6	5
		1999–2000	194.5	200.8	1

SE04007 Lower Heights Farm H.A: 27
NGR: SE 02954792 M.A: EA North East
EEC Unit: 15 Level: 258.32m AOD
Comment: No data 1996 and 1997. Possibly affected by pumping.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1971–2000		1995–96	249.3	255.2	
Mean ann. range:	2.05m	1996–97			
Maximum ann. range:	4.12m	1997–98	251.9	255.5	
Minimum ann. range:	0.67m	1998–99	251.9	255.9	1
		1999–2000	250.4	255.9	2

SE24002B Green Lane Dye Works H.A: 27
NGR: SE 20674053 M.A: EA North East
EEC Unit: 16 Level: 145m AOD
Comment: Health and safety access problems. Borehole shows very little seasonal fluctuation.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1971–2000		1995–96	133.6	140.0	
Mean ann. range:	6.22m	1996–97	132.2	139.0	
Maximum ann. range:	17.30m	1997–98	131.8	137.9	
Minimum ann. range:	1.48m	1998–99	132.1	134.3	
		1999–2000	131.5	134.3	

SE27008 Kirby Moor Farm H.A: 27
NGR: SE 21207380 M.A: EA North East
EEC Unit: 22 Level: 173.98m AOD
Comment: Records in early 1970s show significant effects of abstraction, followed by a recovery to stability in the 1980s. Not possible to calculate Mean Annual Recharge.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1971–2000		1995–96	153.5	153.8	
Mean ann. range:	0.69m	1996–97	153.5	153.8	
Maximum ann. range:	2.96m	1997–98	153.5	154.2	
Minimum ann. range:	0.14m	1998–99	153.5	154.2	
		1999–2000	153.5	153.8	

Aquifer: Carboniferous Limestone

SE06001 Jerry Laith Farm H.A: 27
NGR: SE 02416183 M.A: EA North East
EEC Unit: 19 Level: 178.25m AOD
Comment: Blocked at 29m. Unreliable: shows c. 29m drop in level after 1993.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1971–2000		1995–96	132.5	161.2	
Mean ann. range:	11.40m	1996–97	132.5	154.4	
Maximum ann. range:	43.20m	1997–98	132.5	154.4	
Minimum ann. range:	1.04m	1998–99	138.4	153.7	
		1999–2000	138.4	154.2	

SK15016 Alstonfield H.A: 28
NGR: SK 12925547 M.A: EA Midlands
EEC Unit: 2 Level: 280.25m AOD
Comment: Index well. Hydrograph shows an open groundwater system very responsive to seasonal recharge.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1974–2000		1995–96	174.9	216.1	39
Mean ann. range:	31.10m	1996–97	175.0	194.5	55
Maximum ann. range:	43.50m	1997–98	175.6	208.2	95
Minimum ann. range:	12.70m	1998–99	175.7	208.2	84
		1999–2000	175.7	206.1	78

SK17013 Hucklow South H.A: 28
NGR: SK 17787762 M.A: EA Midlands
EEC Unit: 1 Level: 301.82m AOD
Comment: Hydrograph shows an open groundwater system very responsive to seasonal recharge.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1969–2000		1995–96	250.1	279.2	73
Mean ann. range:	24.60m	1996–97	248	276.8	10
Maximum ann. range:	37.80m	1997–98	256.0	276.8	51
Minimum ann. range:	10.00m	1998–99	255.6	273.4	56
		1999–2000	253.0	273.4	63

ST64033 Oakhill No. 1 H.A: 53
NGR: ST 65604790 M.A: EA South West
EEC Unit: 7 Level: 159.88m AOD
Comment: Good reliable data and representative of natural conditions.

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1974–2000		1995–96	148.2	154.3	85
Mean ann. range:	4.83m	1996–97	147.0	151.5	11
Maximum ann. range:	12.80m	1997–98	147.0	156.9	
Minimum ann. range:	1.15m	1998–99	148.0	153.9	13
		1999–2000	148.7	154.0	86

Aquifer: Fell Sandstone

NT94003B Royalty Observation H.A: 21
NGR: NT M.A: EA North East
EEC Unit: Level: 56.68m AOD
Comment:

		Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
Period: 1990–2000		1995–96	42.23	43.19	11
Mean ann. range:	0.85m	1996–97	42.39	43.19	49
Maximum ann. range:	1.77m	1997–98	42.24	44.08	22
Minimum ann. range:	0.23m	1998–99	43	44.61	95
		1999–2000	42.98	44.61	43

NT95021 **Middle Ord** H.A: 21
NGR: NT M.A: EA North East
EEC Unit: 1 Level: 64.96m AOD
Comment: No significant seasonal fluctuations. Borehole shows consistent drop in levels since early 1990s, possibly in response to regional abstraction.

Period: 1974–1999
Mean ann. range: 0.48m
Maximum ann. range: 1.16m
Minimum ann. range: 0.05m

Period	Trough level (m)	Peak level (m)	Fluctuations as a % of the mean range
1995–96	28.74	29.98	
1996–97	28.04	29.22	
1997–98	27.44	28.65	
1998–99	27.06	27.92	
1999–2000	27.06	27.92	

THE NATIONAL RIVER FLOW AND GROUNDWATER LEVEL ARCHIVE DATA RETRIEVAL SERVICES

In order that the contents of the National River Flow (NRFA) and National Groundwater Level (NGLA) Archives may be readily accessible a suite of standard programs has been developed to provide a comprehensive selection of retrieval options. In response to user requirements these data retrieval facilities are being continually updated and extended. A wide range of specialist analyses and presentations is now available. An outline of the data retrieval facilities is given below; further details are available by application to the National Water Archive (email: nwamail@ceh.ac.uk) or via the relevant websites which serve as a gateway to a range of data/information retrieval services (see below and page 202).

Cost of Service

To cover the computing and handling costs, a moderate charge may be made depending on the output options selected. Estimates of these charges may be obtained on request; the right to amend or waive charges is reserved.

River Flow Data Retrieval

The National River Flow Archive comprises around 44,000 station years of daily river flows and incorporates data from over 1400 gauging stations throughout the United Kingdom. In addition to gauged flow data, naturalised datasets have been derived for a small number of gauging stations. Catchment areal rainfall and the highest instantaneous flow, when available, are also archived on a monthly basis. Note, however, that the principal sources of nationally archived flood data are the Peaks-Over-Threshold (POT) and Flood Event archives held at CEH Wallingford. A range of validation procedures is applied to most of the contemporary river flow and rainfall data but the quality control of much of the historical data will have been more rudimentary. As a consequence, significant variation in the precision of archived datasets is to be expected.

All retrieval programs have been designed to allowed flexibility in the presentation of options, particularly those producing graphical output. Most data is now disseminated electronically and a choice of output formats is available to suit user needs. Normally, appropriate reference and descriptive information is provided to help interpret analyses based on the data.

Before finalising a data request it is recommended that the Tables of Hydrometric Statistics be consulted as a guideline to the suitability of the river flow data for particular applications. Details of the availability of data on a monthly basis are provided in the 'Summary of Archived Data' (pages 165 to 173).

A list of standard data retrieval options is given on page 199. For details of the latest enhancements to the retrieval suite please visit the NRFA website:
http://www.nwl.ac.uk/ih/nrfa/index.htm

Groundwater Level Data Retrieval

The National Groundwater Level Archive holds borehole level data and site details for around 170 representative wells and boreholes throughout the United Kingdom. Some characteristics of individual wells, and well records, are given in the Groundwater-Register and Statistics section but it is recommended that data users contact the Hydrogeology Group (see below) before finalising any data request.

Six standard options are available for retrieving data. A description of each option is given overleaf. Options 1 to 4 give details of the well site, the period of record available, and maximum and minimum recorded levels in addition to the output specific to each option. Data may be retrieved for a specific well or for groups of wells by well reference numbers, by area (using National Grid References), by aquifer, by hydrometric area, by measuring authority, or by any combination of these parameters.

At the present time not all the data contained within the Archive have been validated.

For details of the latest enhancements to the NGLA retrieval suite please visit the BGS Hydrogeological Group's Website:
http://www.nwl.ac.uk/bgs/

Requests for Retrieval Options

Requests for data should include: the name and address to which the output should be directed, the sites, or areas, for which data are required together with the period of record of interest (where appropriate) and the title of the required option. Where possible, a daytime telephone number should be given.

Requests for retrieval options should be addressed to:

Surface Water Data:

National Water Archive Office
Institute of Hydrology
Maclean Building
Crowmarsh Gifford
WALLINGFORD
OXFORDSHIRE OX10 8BB

Tel: +44(0) 01491 838800
Email: nwamail@ceh.ac.uk

Groundwater Level Data:

The British Geological Survey
Hydrogeology Group
Maclean Building
Crowmarsh Gifford
WALLINGFORD
OXFORDSHIRE OX10 8BB

Tel: +44(0) 01491 838800
Email: hydroeng@bgs.ac.uk

The National Water Archive

The National Water Archive (NWA) is one of the Natural Environment Research Council's seven Designated Data Centres. These Centres, located at NERC Institute sites, exist to hold data for distinct functional areas and provide information and advisory services to a wide range of users.

The National River Flow and National Groundwater Level Archives form the kernel of the National Water Archive holdings at Wallingford but a very broad range of hydrological – and related – data sets are being assimilated into the co-ordinated management that the NWA provides. Data holdings range from the catchment scale (e.g. detailed climatological and hydrological data for a network of experimental catchments) to national (flood event data) and international coverage (world floods archive). The utility of the archived time series data is enhanced by the availability of complementary spatial information (for example the digitised river network and UK soils hydrology map) and by the manipulative potential provided by modern data handling systems and analytical packages.

Staff at the NWA maintain close contacts with measuring authorities and keep under review developments in the field of network design, instrumentation and information technology. A continuing dialogue with both data suppliers and an active community of users ensures that the databases and retrieval facilities are reviewed continuously to provide an effective and responsive service across a broad range of applications.

Datasets of particular hydrological interest include an archive of 89,000 flood peaks from over 1000 catchments, a flood event archive comprising causative rainfall and river flows at short time intervals for over 4000 individual events, and experimental catchment data for Plynlimon (mid-Wales) and Balquhidder (Scotland). Equivalent European data also exists as part of the FRIEND project of the International Hydrological Programme. Data from NERC Thematic Programmes (e.g. the LOIS Rivers Database), water quality information from the Acid Waters Monitoring Network and pesticide studies, and major overseas projects from Brazil and the Sahel are also held.

Data may be retrieved from these sources in a variety of formats but, for some, access restrictions may apply.

The National Well Record Archive

The British Geological Survey maintains the National Well Record Archive (NWRA) for England and Wales. Currently this archive includes hydrogeological details and reference information for over 150,000 shafts, boreholes and some springs – predominantly constructed or used for water supply or the monitoring of groundwater levels or quality. The archive is organised into paper files based upon the 10 kilometre squares of the National Grid. Each file includes a register which details the accession number, the depth, the national grid reference and certain other details. This material is an essential component in the hydrogeological enquiry service operated by BGS and the register details are in the process of being transferred to a digital format.

The archive is located at the Wallingford Office of BGS (address above) and all the non-confidential records are open to inspection by the general public. Those wishing to avail themselves of this facility should contact the BGS Records Section in advance to discuss access procedures and costs.

National Geosciences Information Centre

The NWRA is associated with the National Geosciences Information Service (NGIS), one of a number of computer-based data centres established at NERC Institutes. The NGIS is located at the BGS Headquarters, Keyworth, near Nottingham (Telephone: 0602 363100) and provides access to a broad range of geological information (for example, geophysical and hydrogeological logs, core samples and chemical analyses).

STANDARD DATA RETRIEVAL OPTIONS

National River Flow Archive

No.	OPTION TITLE
1	Table of daily mean gauged discharges
2	Table of daily mean naturalised discharges
3	Yearbook data tabulation (daily)
4	Table of monthly mean gauged discharges
5	Table of monthly mean naturalised discharges
6	Yearbook data tabulation (monthly)
7	Table of monthly extreme flows
8	Table of catchment monthly rainfall
9	Table of catchment monthly areal rainfall and runoff
10	Hydrographs of daily mean flows
11	Hydrographs of monthly mean flows
12	Flow duration statistics
13	Table of gauging station reference information
14	Table of hydrometric statistics
15	Gauging station descriptions
16	River flow pattern plots
17	Gauging station summary sheet

National Groundwater Level Archive

No.	OPTION TITLE
1	Table of groundwater levels
2	Table of annual maximum and minimum groundwater levels
3	Table of monthly maximum, minimum and mean groundwater levels
4	Hydrographs of groundwater levels
5	Site details
6	Site details and statistics as presented in the 'Borehole Register and Statistics' section.

DIRECTORY OF MEASURING AUTHORITIES

	Address	Code
Environment Agency	Rio House, Waterside Drive, Aztec West, Almondsbury, BRISTOL, BS12 4UD	EA

Environment Agency Regional Headquarters[1]

Anglian Region	Kingfisher House, Goldhay Way, Orton Goldhay, PETERBOROUGH, PE2 0ZR
North East Region	Rivers House, 21 Park Square South, LEEDS, LS1 2QG
North West Region	Richard Fairclough House, Knutsford Road, WARRINGTON, WA4 1HG
Midlands Region	Sapphire East, 550 Streetsbrook Road, SOLIHULL, B91 1QT
Southern Region	Guildbourne House, Chatsworth Road, WORTHING, BN11 1LD
South West Region	Manley House, Kestrel Way, Sowton Industrial Estate, EXETER, EX2 7LQ
Thames Region	Kings Meadow House, Kings Meadow Road, READING, RG1 8DQ
Environment Agency Wales	Rivers House/Plas-yr-Afon, St Mellons Business Park, CARDIFF, CF3 0LT

Scottish Environment Protection Agency[2]

Corporate Office	Erskine Court, The Castle Business Park, STIRLING, FK9 4TR
National Contact for Hydrological Information	SEPA National Hydrology Manager, 7 Whitfriars Crescent, PERTH, PH2 0FA,

Scottish Environment Protection Agency - Area Offices

North Region (Highlands, Islands and Grampien)	Graesser House, Fodderty Way, DINGWALL, IV15 9XB	SEPA-N
East Region (South East)	Clearwater House, Heriot Watt Research Park, Avenue North, Riccarton, EDINBURGH, EH14 4AP	SEPA-E
West Region (South West)	5 Redwood Crescent, Peel Port, EAST KILBRIDE, G75 5PD	SEPA-W

[1] Although the administrative boundaries of some of the EA regions (see Frontispieces) differ appreciably from the hydrological regions featured in this publication, hydrometric data collection is generally organised on a basin or catchment basis. For further details relating to the monitoring sites featured on the Maps 4–11 initial contact should normally be made with the EA headquarters in the hydrological province in which the particular site is found.

[2] As of April 2001 SEPA's regional structure was replaced by a national structure with regions being replaced by areas (with the same geographic boundaries) - the area designations are shown below the pre-2001 regional designations. For most hydrometric data requests, the appropriate area office will normally be the initial contact point.

Northern Ireland - Rivers Agency Headquarters

	Hydebank, 4 Hospital Road, BELFAST, BT8 8JP	RA

Other measuring authorities

East of Scotland Water Authority†	West Grove, Waverley Road, MELROSE, TD6 9SJ	ESWA
British Waterways	Willow Grange, Church Road, WATFORD, WD1 3QA	BW
Essex & Suffolk Water Plc	Hall Street, CHELMSFORD, CM2 OHH	ESW
Geological Survey of Northern Ireland	20 College Gardens, BELFAST, BT9 6BS	GSNI
North of Scotland Water Authority†	Denburn House, 25 Union Terrace, ABERDEEN, AB10 1NN	NSWA
CEH Wallingford	Maclean Building, WALLINGFORD, OX10 8BB	CEH
Northumbrian Water Group Plc	Northumbria House, Regent Centre NEWCASTLE UPON TYNE, NE3 3PX	NEW
North West Water Plc*	Dawson House, Liverpool Road, WARRINGTON, WA5 3LW	NWW
Southern Water Plc	Southern House, Yeoman Road, WORTHING, BN13 3NX	SW
West of Scotland Water Authority†	419 Balmore Road, GLASGOW, G22 6NU	WSWA
Yorkshire Water Services Ltd	Western House, Halifax Rd, BRADFORD, BD6 2LZ	YW

Websites of the principal data suppliers

Environment Agency	http://www.environment-agency.gov.uk/
Scottish Environment Protection Agency	http://sepa.org.uk/
Rivers Agency (Dept. Agriculture and Rural Development)	http://www.dardni.gov.uk/

† Superceded by the creation of Scottish Water in April 2002.

* Now United Utilities.

Note: The measuring authorities listed in this directory provide (or have provided) daily flow data to the national archive for primary flow measurement stations.

PUBLICATIONS — in the Hydrological data UK Series

Introduction

Using the resources of the National River Flow and National Groundwater Level Archives, the Hydrological data UK series of Yearbooks has provided documentation and interpretation of hydrological conditions and water resource variations throughout the UK since the inception of the series in 1981.

Following a readership consultation exercise in 1995, a review of the Hydrological data UK series was undertaken. A major objective was to exploit the opportunities afforded by new information dissemination options to ensure that nationally archived hydrometric datasets are more widely accessible. Accordingly, it was decided to publish future Yearbooks on the World Wide Web; the first electronic Yearbook (for 1996) was posted on the NRFA website (see below) in December 1997. Subsequently the website was restructured to provide access to a broader range of information, and greater flexibility in its presentation. The pace of technological change and, in particular, the user demand for new forms of data presentation will continue to help shape the future structure of the Hydrological data UK series.

The National River Flow Archive Website

The NRFA website was established in 1996 to provide a gateway to a range of UK hydrological information and validated datasets. It can be accessed via:

http://www.nwl.ac.uk/ih/nrfa/index.htm

Currently the website comprises six main components:

River Flow Data – Daily flow data for 200 index gauging stations throughout the UK together with details of the NRFA data retrieval facilities.

Water Watch – Annual and monthly summaries of hydrological and water resources variability throughout the UK together with other material related to the National Hydrological Monitoring Programme (see below).

UK Gauging Station Network – Location maps, reference information, hydrographs, flow duration curves and descriptive material relating to all primary gauging stations in the UK.

Publications – Details of publications in the Hydrological data UK series and other associated publications, reports and teaching resources.

Hydrological Trends – Regional and site-specific trends for a range of river flow and groundwater level variables, including UK climate change indicators.

National Groundwater Level Archive – Provides access to groundwater data retrieval options and links to the comprehensive hydrogeological information holdings of the British Geological Survey.

The National Hydrological Monitoring Programme

Since the winter of 1988/89 monthly reports on hydrological and water resources variability throughout the UK have been prepared jointly by CEH Wallingford and the British Geological Survey on behalf of the Department of the Environment, Food and Rural Affairs, and the Environment Agency (and their precursors). Financial support towards their publication costs is also provided by the Scottish Environment Protection Agency, The Rivers Agency (Department of Agriculture and Rural Development) in Northern Ireland and OFWAT.

The programme utilises networks of index monitoring sites to document variations in rainfall (the majority of the rainfall data is supplied by the Met Office), river flows, groundwater resources and overall reservoir stocks. The programme relies on the active cooperation of measuring authorities throughout the UK to provide contemporary hydrometric and water resources information.

Reports are published within 10 working days of month-end. Subscription to the UK Hydrological Summaries – currently £48 per year – may be arranged through the National Water Archive Office – see page 197. The bulk of the material is subsequently posted on the 'Water Watch' website – where an archive of monthly reports back to March 1997 is maintained. The same site also provides access to the Hydrological Reviews of the Year (published in the Yearbooks prior to 1996).

Hydrological data UK Publications

Hydrometric Register and Statistics Volumes

Earlier editions of this current publication are available covering 1981–85, 1986–90 and 1991–95. A proportion of the featured material is now posted on the NRFA website but the Hydrometric Register and Statistics volumes will continue to be published in hard-copy format at 5-yearly intervals.

Yearbooks

Copies of most Yearbooks in the Hydrological data UK series (1981–95) may be obtained through the National River Flow Archive Office. Each Yearbook brings together the principal datasets relating to river flows, groundwater levels and areal rainfall throughout the United Kingdom. A comprehensive hydrological review

of the year is featured in each Yearbook. Also included in the editions for 1986–95 are water quality data for a representative selection of river basins throughout Britain.

Details of availability and concessionary prices may be obtained on application to the NRFA Office (Tel: +44(0) 01491 692468; email: nwamail@ceh.ac.uk).

The 1988–92 Drought

This report provides comprehensive documentation of the 1988–92 drought within a hydrological framework and establishes a benchmark against which future periods of severe rainfall deficiency may be compared. The spatial and temporal variations in the drought's intensity are examined and its severity assessed within the perspective provided by long-term rainfall and hydrometric records. The synoptic backcloth to the drought's development is also reviewed and the European perspective is examined using selected rainfall and river flow records to index drought severity.

The 1984 Drought

The first occasional report in the Hydrological data UK series concerns the 1984 drought. The structure of the report follows the hydrological cycle with chapters devoted to rainfall, evaporation, runoff and water storage in surface reservoirs and aquifers. The report documents the drought in a water resources framework and its development, duration and severity are examined with particular reference to regional variations in intensity.

Other Publications

Long Term Hydrographs

In 1990 the British Geological Survey launched a series of wallcharts depicting long term variations in groundwater levels. Long term hydrographs are currently available for the Chilgrove House (1836-) and Dalton Holme (1883-) boreholes and Therfield Rectory (1883-) well in the Chalk of the South downs, Yorkshire and Hertfordshire respectively. Copies of the groundwater level hydrographs may be obtained from the British Geological Survey (for further details visit the BGS Website).

Long term hydrographs of daily or monthly flows are also available for selected gauging stations (e.g. the River Thames at Kingston with records from 1883) and for England and Wales as a whole, for details contact the National River Flow Archive Office.

The Flood Estimation Handbook

Published in 1999, the Flood estimation Handbook represents the outcome of a 5-year research programme at the Institute of Hydrology (now CEH Wallingford) to develop and implement new generalised procedures for rainfall and flood frequency estimation in the UK. The Handbook – which largely supersedes the Flood Studies Report – seeks to improve decision making about flood risks in the UK. Volume 3 contains summary details of annual maximum flows and Peaks over a Threshold; the corresponding time series are contained on an accompanying CD Rom.

Further details relating to the Handbook and associated software may be found on the FEH Website: www.nwl.ac.uk/feh.

GLOSSARY

This glossary of terms is intended primarily to help explain some of the technical vocabulary used in the section of the gauging station register. Where possible, the definitions given below are based upon those developed by the International Standards Organisation[1].

Surface Water

Afflux	The rise in water level immediately upstream of, and due to, an obstruction.
Backwater (curve)	The profile of the water surface upstream when its surface slope is generally less than the bed slope. The backwater curve generally occurs upstream of an obstruction or confluence.
Broad-crested	A weir of sufficient breadth (in the direction of the flow) such that critical flow occurs on the crest of the weir. The term long-crested is sometimes also applied to such structures.
Cableway	An assembly of winches and ropes and a carrier for placing the current meter at any desired point in the cross section.
Calibration	The establishment of a discharge relationship (or rating) with the measured stage values. Sometimes used as a synonym for the stage-discharge relation.
Compensation	A minimum flow which a water authority is under an obligation to discharge into a watercourse as a condition of carrying out their undertaking. Commonly the obligation relates to the maintenance of a discharge rate below a reservoir. The term 'residual flow' is preferred by some authorities.
Compound weir	A weir containing two or more sections, which may be of different types, each section normally having a different height.
Control	The physical properties of a channel, natural or artificial, which determine the relationship between stage and discharge at a location in the channel.
Crest-tapping	A means of measuring the pressure head near to the crest of a weir – the ratio of this head to the upstream measured head can be used to determine the reduction factor necessary when flows are non-modular.
Critical flow	The flow in which the total energy head* is a minimum for a given discharge; critical flow conditions are created by the installation of most standard weirs and flumes (as well as by natural obstructions and constrictions).
Depth of approach	The depth of the upstream bed at the tapping point below the lowest point of a weir crest.
Drawdown curve	The profile of the water surface where its surface slope exceeds the bed slope, for instance, immediately upstream of a weir or flume.
Drowned (or submerged)	A weir in which the upstream level is affected by the downstream water level (and the 'modular' stage-discharge relation no longer applies).
Flume	An artificial channel with clearly specified shape and dimensions which may be used for the measurement of flow. A standing-wave flume, for instance, contains a constriction which causes the flow to change from sub-critical* to super-critical* and in which the measurement of upstream water level (alone) allows the discharge to be computed.
Freshets	The periodical release of discharge rates over and above the basic compensation flow. These artificial floods are intended to benefit the aquatic environment, particularly fisheries.
Gaugeboard	A device with a graduated scale installed at a gauging station for measuring the level of water relative to a datum. Gaugeboards can be either vertical or inclined.
Hydraulic jump	The sudden change of flow from super-critical flow to sub-critical flow. The transition is marked by a standing-wave.
Hysteresis	The effect on the stage-discharge relation at a gauging station subject to variable water surface slope where, for the same gauge height, the discharge on a rising stage differs from that on a falling stage.

Influent stream	One which flows above the water-table and contributes to it by natural leakage through the bed of the channel (sometimes termed a 'losing' stream; conversely a 'gaining' stream has its flow naturally augmented by inflow through the bed or banks).
Invert	The lowest part of the cross-section of a natural or artificial channel.
Modular limit	The submergence ratio when the flow just begins to be affected by the downstream level.
Nappe	The jet formed by the flow over a weir. A clinging nappe is one held in contact with the downstream face of a weir.
Rhymer weir	A simple form of variable geometry weir consisting of fixed horizontal beams which support vertical timber posts to form a series of rectangular openings - these may be closed by means of timber gates.
Stage	The elevation of the free surface of a stream relative to a datum; sometimes also referred to as the gauge height.
Stage-discharge	An equation, table or formula which expresses the relation between the stage and the discharge in an open channel at a given cross-section.
Stilling well	A well connected with the main stream in such a way as to permit the measurement of stage in relatively still liquid.
Submergence	The ratio of the downstream total head (measured head plus velocity head) to the upstream total head over a weir.
Suppressed weir	A weir whose sides are in the same plane as the open channel thus eliminating (suppressing) side contractions of the stream.
Thin-plate weir	A weir constructed of a vertical thin plate with a thin crest shaped in such a manner that the nappe springs clear of the crest.
Triangular-profile weir	A weir having a triangular profile in a vertical direction in the direction of flow. The 'Crump' and 'Flat V' weirs are examples of such structures.
Unstable channel	Channel in which there are frequent and significant changes in control.
Velocity of approach	The mean velocity in an open channel at a specified distance upstream of a measuring device.
Velocity head	The head obtained by dividing the square of the mean velocity (in the measuring section) by twice the acceleration due to gravity.

* For definitions of these terms see reference 1.

Groundwater

Aquifer	A rock formation containing groundwater that can be abstracted economically in useful quantities.
Artesian well	A shaft, or more commonly a borehole, within which, when the aquifer is penetrated, water rises within the well to a level above the top of the aquifer, i.e. above the base of a confining layer. The term is usually reserved for wells that naturally overflow at the ground surface; where the water level rises, but does not reach the ground surface, the term sub-artesian is sometimes used.
Borehole	A well constructed by machinery, usually less than one metre in diameter. Usually constructed vertically, but inclined boreholes are occasionally constructed.
Confined aquifer	An aquifer in which groundwater is held under pressure by a confining layer (see also artesian well).
Confining layer	An impermeable rock formation that immediately overlies an aquifer, and which may contain water in the latter under pressure.

Groundwater	Sub-surface water contained within the saturated zone.
Observation well	A shaft or borehole used for observing groundwater head or quality.
Permeability	The ability of a material to allow the passage of a fluid.
Piezometric	The surface that represents the static head of the groundwater surface in a confined aquifer; in practice, the static head is taken to be the water level measured in a well penetrating a confined aquifer.
Potentiometric	The surface that represents the static head of the groundwater surface in both confined aquifers and water-table aquifers (i.e. where the water or pressure surface is at atmospheric pressure). This term includes piezometric surface and water-table.
Rising	A term used particularly in South West England for a continuous outflow of subterranean water of such dimensions as to be regarded as the emergence of a stream rather than a spring; characteristic of Karstic aquifers such as the Carboniferous Limestone in the Mendip Hills.
Saturated zone	That part of an aquifer, normally beneath the deepest water-table, in which ideally all voids are filled with water under pressure greater than atmospheric.
Shaft	A well constructed by hand and generally greater than one metre in diameter.
Unsaturated zone	That part of an aquifer between the ground surface and the water-table.
Water level	In this context, the altitude (or depth) of the water surface as measured in a well.
Water-table	The surface of a groundwater body at which the water pressure is atmospheric. Unless the water-table is coincident with the ground surface, an unsaturated zone will be present.
Well	A term used to include both shafts and boreholes although occasionally used for shafts only.

ABBREVIATIONS

Note: The following abbreviations do not purport to represent any standardised usage; they have been developed for use in the Hydrological data UK series of publications only. Where space constraints have required alternative forms of these conventional abbreviations to be used, the meaning should be evident from the context.

Adf	Average daily flow
ALF	Alleviation of Low Flows
AOD	Above Ordnance Datum
B-c	Broad-crested
Bk	Beck
Blk	Black
Br	Bridge
Brk or B	Brook
Brn	Burn
BNFL	British Nuclear Fuels Ltd
BS	British Standards
Ch	Channel
C/m	Current meter(ing)
Com	Common
Dk	Dike
Dmfs	Daily mean flows
Dr or D	Drain
D/s	Downstream
E	East
EM	Electromagnetic gauging station
F&M	Foot and Month disease
Frm	Farm
G/s	Gauging station
Gw	Groundwater
HEP	Hydro-electric power
Hifs	Highest instantaneous flows
Ho	House
Hosp	Hospital
IH	Institute of Hydrology
L	Loch or lake
Lb	Left hand river bank (looking downstream)
Ln	Lane
L'st	Limestone
Ltl	Little
MAF	Mean annual flood
Mkt	Market
Ml/d	Megalitres per day
Mnr	Manor
N	North
NERPB	North East River Purification Board
NSHEB	North of Scotland Hydro-Electric Board
Ntch	Notch
NW	North West
OD	Ordnance Datum
O/f	Outfall or outflow
ORS	Old Red Sandstone
Pk	Park
Pop	Population
POR	Period of record
PS	Pumping station

Pt	Point
PT	Permo-Triassic (sandstones)
PWS	Public water supply
QMED	Median annual flood
RAFT	Rising Air Float Technique
Rb	Right hand river bank (looking downstream)
R/c	Racecourse
RCS	Regional communications system
Rd	Road
Res	Reservoir
Rh	Right hand
RPB	River Purification Board
S	South
S'st	Sandstone
Sch	School
S-D	Stage-discharge relation
SDD	Scottish Development Department (now SOE)
SE	South East
SOE	Scottish Office Environment Department
Sl	Sluice
Sp	Spring
St	Stream
STW	Sewage Treatment Works
SW	South West
TS	Transfer scheme
US	Ultrasonic gauging station
U/s	Upstream
VA	Velocity-area gauging station/method
W	West
W'course	Watercourse
WBGS	West Berkshire Groundwater Scheme
Wd	Wood
Wr	Weir
WRW	Water reclamation works
Wtr	Water
WTW	Water treatment works

For a full explanation of the letter codes used to categorise flow measurement stations, see page 5.

Reference

1. International Standards Organisation, 1978. Liquid flow measurement in open channels. Vocabulary and symbols, ISO 772,1978.

RIVERS Agency

SEPA Scottish Environment Protection Agency

Environment Agency

Met Office

CEH Centre for Ecology & Hydrology
NATURAL ENVIRONMENT RESEARCH COUNCIL

BGS 1835 British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL